SHARP SERVICE MANUAL

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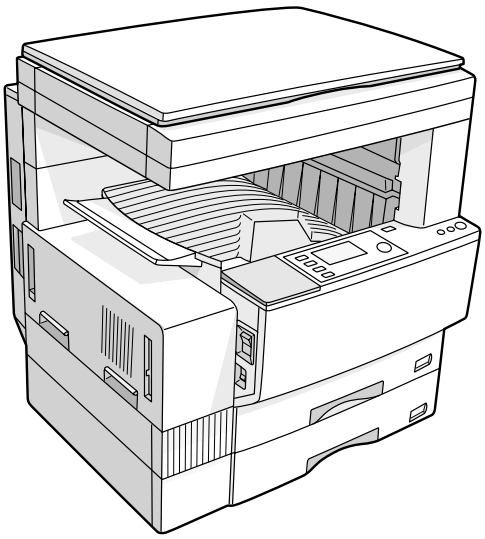

DIGITAL LASER COPIER/ PRINTER

MODEL AR-235 AR-275

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Parts marked with "⚠" are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

SHARP CORPORATION

This document has been published to be used for after sales service only.
The contents are subject to change without notice.

CAUTION

This product is a class 1 laser product that complies with 21CFR 1040.10 and 1040.11 of the CDRH standard and IEC825. This means that this machine does not produce hazardous laser radiation. The use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

This laser radiation is not a danger to the skin, but when an exact focusing of the laser beam is achieved on the eye's retina, there is the danger of spot damage to the retina.

The following cautions must be observed to avoid exposure of the laser beam to your eyes at the time of servicing.

1) When a problem in the laser optical unit has occurred, the whole optical unit must be exchanged as a unit, not as individual parts.
2) Do not look into the machine with the main switch turned on after removing the developer unit, toner cartridge, and drum cartridge.
3) Do not look into the laser beam exposure slit of the laser optical unit with the connector connected when removing and installing the optical system.
4) The middle frame contains the safety interlock switch.
   Do not defeat the safety interlock by inserting wedges or other items into the switch slot.

Warning!
This product is a class A product.
If it is operated in households, offices or similar surroundings, it can produce radio interferences at other appliances, so that the user has to take adequate countermeasures.

CLASS 1 LASER PRODUCT

LASER KLASSE 1

LUOKAN 1 LASERLAITE

KLASS 1 LASERAPPARAT

VAROITUS!

LAITTEEN KÄYTTÄMINEN MUULLA KUIN TÄSSÄ KÄYTTÖOHJEESSA MAINITULLA TAVALLA SAATTAA ALTISTAA KÄYTTÄJÄN TURVALLISUUSLUOKAN 1 YLITTÄVÄLLE NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE.

VARNING

OM APPARATEN ANVÄNDS PÅ ANNAT SÄTT ÄN I DENNA BRUKSANVISNING SPECIFICERATS, KAN ANVÄNDAREN UTSÄTTAS FÖR OSYNLIG LASERSTRÅLNING, SOM ÖVERSKRIDER GRÄNSEN FÖR LASERKLASS 1.

CAUTION

INVISIBLE LASER RADIATION,
WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.

VORSICHT

UNSICHTBARE LASERSTRAHLUNG,
WENN ABDECKUNG GEÖFFNET UND SICHERHEITSVERRIEGELUNG ÜBERBRÜCKT. NICHT DEM STRAHL AUSSETZEN.

VARO !

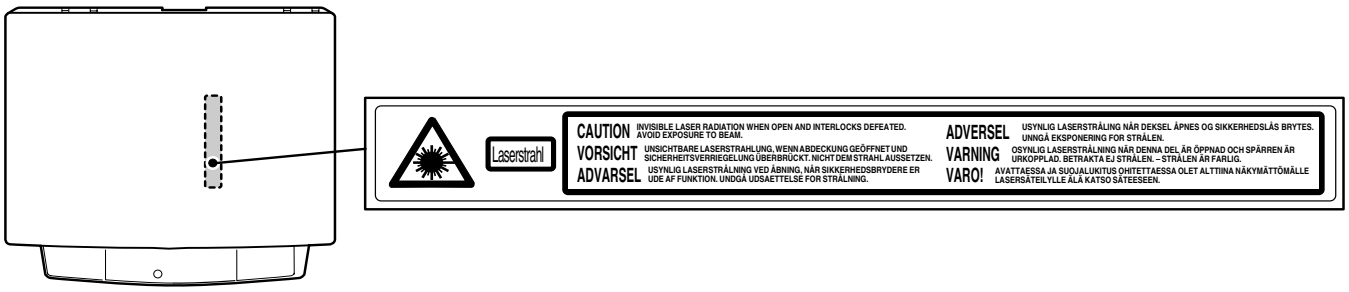
AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE ÄLÄ KATSO SÄTEESEEN.

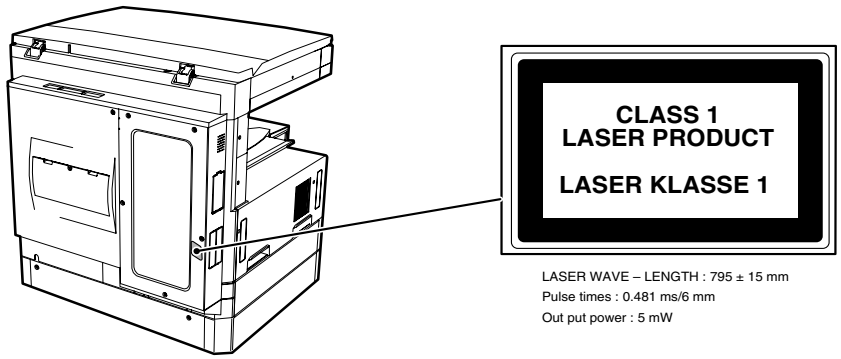
ADVARSEL

USYNLIG LASERSTRÅLNING VED ÅBNING, NÅR SIKKERHEDSBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSAETTELSE FOR STRÅLNING.

VARNING !

OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRAKTA EJ STRÅLEN. – STRÅLEN ÄR FARLIG.


Laserstrahl
CAUTION INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.
VORSICHT UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET UND SICHERHEITSVERRIEGELUNG ÜBERBRÜCKT. NICHT DEM STRAHL AUSSETZEN.
ADVARSEL USYNLIG LASERSTRÅLNING VED ÅBNING, NÅR SIKKERHEDSBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSAETTELSE FOR STRÅLNING.
ADVERSEL USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES OG SIKKERHEDSLÅS BRYTES. UNNGÅ EKSPONERING FOR STRÅLEN.
VARNING OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRAKTA EJ STRÅLEN. – STRÅLEN ÄR FARLIG.
VARO! AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE ÄLÄ KATSO SÄTEESEEN.



LASER WAVE – LENGTH : 795 ± 15 mm
Pulse times : 0.481 ms/6 mm
Out put power : 5 mW

Disconnect the AC cord before servicing the unit.

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[1] NOTE FOR SERVICING

This Service Manual uses some photographs to assure safe operation.

This Service Manual uses some photographs to assure safe operation.
Please understand the meanings of photographs before servicing.

⚠ WARNING: If this WARNING should be ignored, a serious danger to life or a serious injury would be resulted.

⚠ CAUTION: If this CAUTION should be ignored, an injury or a damage to properties would be resulted.

1. Warning for servicing

1) Be sure to connect the power cord only to a power outlet that meets the specified voltage and current requirements.

   Avoid complex wiring, which may lead to a fire or an electric shock.

   It may cause a fire or an electric shock.

2) If there is any abnormality such as a smoke or an abnormal smell, interrupt the job and disconnect the power plug.

   It may cause a fire or an electric shock.

3) Be sure to connect the grounding wire. If an electric leakage occurs without grounding, a fire or an electric shock may be the result.

   To protect the machine and the power unit from lightening, grounding must be made.

4) When connecting the grounding wire, never connect it to the following points.

   It may cause an explosion, a fire or an electric shock.

   - Gas tube
   - Lightning conductor
   - A water pipe or a water faucet, which is not recognized as a grounding object by the authorities.
   - Grounding wire for telephone line

5) Do not damage, brake, or work the power cord.

   Do not put heavy objects on the power cable. Do not bend it forcibly or do not pull it extremely.

   It may cause a fire or an electric shock.

6) Keep the power cable away from a heat source.

   Do not insert the power plug with dust on it into a power outlet.

   It may cause a fire or an electric shock.

7) Do not put a receptacle with water in it or a metal piece which may drop inside the machine.

   It may cause a fire or an electric shock.

8) With wet or oily hands, do not touch the power plug, do not insert the telephone line jack, do not operate the machine, or do not perform servicing.

   It may cause an electric shock.

2. Precautions for servicing

1) When servicing, disconnect the power plug, the printer cable, the network cable, and the telephone line from the machine, except when performing the communication test, etc.

   It may cause an injury or an electric shock.

2) There is a high temperature area inside the machine. Use an extreme care when servicing.

   It may cause a burn.

3) There is a high voltage section inside the machine which may cause an electric shock . Be careful when servicing.

4) Do not disassemble the laser unit. Do not insert a reflective material such as a screwdriver in the laser beam path.

   It may damage eyes by reflection of laser beams.

5) When servicing with the machine operating, be careful not to squeeze you hands by the chain, the belt, the gear, and other driving sections.

6) Do not leave the machine with the cabinet disassembled.

   Do not allow any person other than a serviceman to touch inside the machine. It may cause an electric shock, a burn, or an injury.

7) When servicing, do not breathe toner, developer, and ink excessively. Do not get them in the eyes.

   If toner, developer, or ink enters you eyes, wash it away with water immediately, and consult a doctor if necessary.

8) The machine has got sharp edges inside. Be careful not to damage fingers when servicing.

9) Do not throw toner or a toner cartridge in a fire. Otherwise, toner may pop and burn you.

10) When replacing the lithium battery of the PWB, use a specified one only.

    If a battery of different specification is used, it may be broken, causing breakdown or malfunction of the machine.

11) When carrying a unit with PWB or electronic parts installed to it, be sure to put it in an anti-static-electricity bag.

    It may cause a breakdown or malfunctions.

3. Note for installing site

Do not install the machine at the following sites.

1) Place of high temperature, high humidity, low temperature, low humidity, place under an extreme change in temperature and humidity.

   Paper may get damp and form dews inside the machine, causing paper jam or copy dirt.

   For operating and storing conditions, refer to the specifications described later.

2) Place of much vibrations

   It may cause a breakdown.

3) Poorly ventilated place

   An electro-static type copier will produce ozone inside it.

   The quantity of ozone produced is designed to a low level so as not to affect human bodies. However, continuous use of such a machine may produce a smell of ozone. Install the machine in a well ventilated place, and ventilate occasionally.

4) Place of direct sunlight.

   Plastic parts and ink may be deformed, discolored, or may undergo qualitative change.

   It may cause a breakdown or copy dirt.

5) Place which is full of organic gases such as ammonium

   The organic photoconductor (OPC) drum used in the machine may undergo qualitative change due to organic gases such as ammonium.

   Installation of this machine near a diazo-type copier may result in dirt copy.

6) Place of much dust

   When dusts enter the machine, it may cause a breakdown or copy dirt.

7) Place near a wall

   Some machine require intake and exhaust of air.

   If intake and exhaust of air are not properly performed, copy dirt or a breakdown may be resulted.

8) Unstable or slant surface

   If the machine drops or fall down, it may cause an injury or a breakdown.

   If there are optional paper desk and the copier desk specified, it is recommendable to use them.

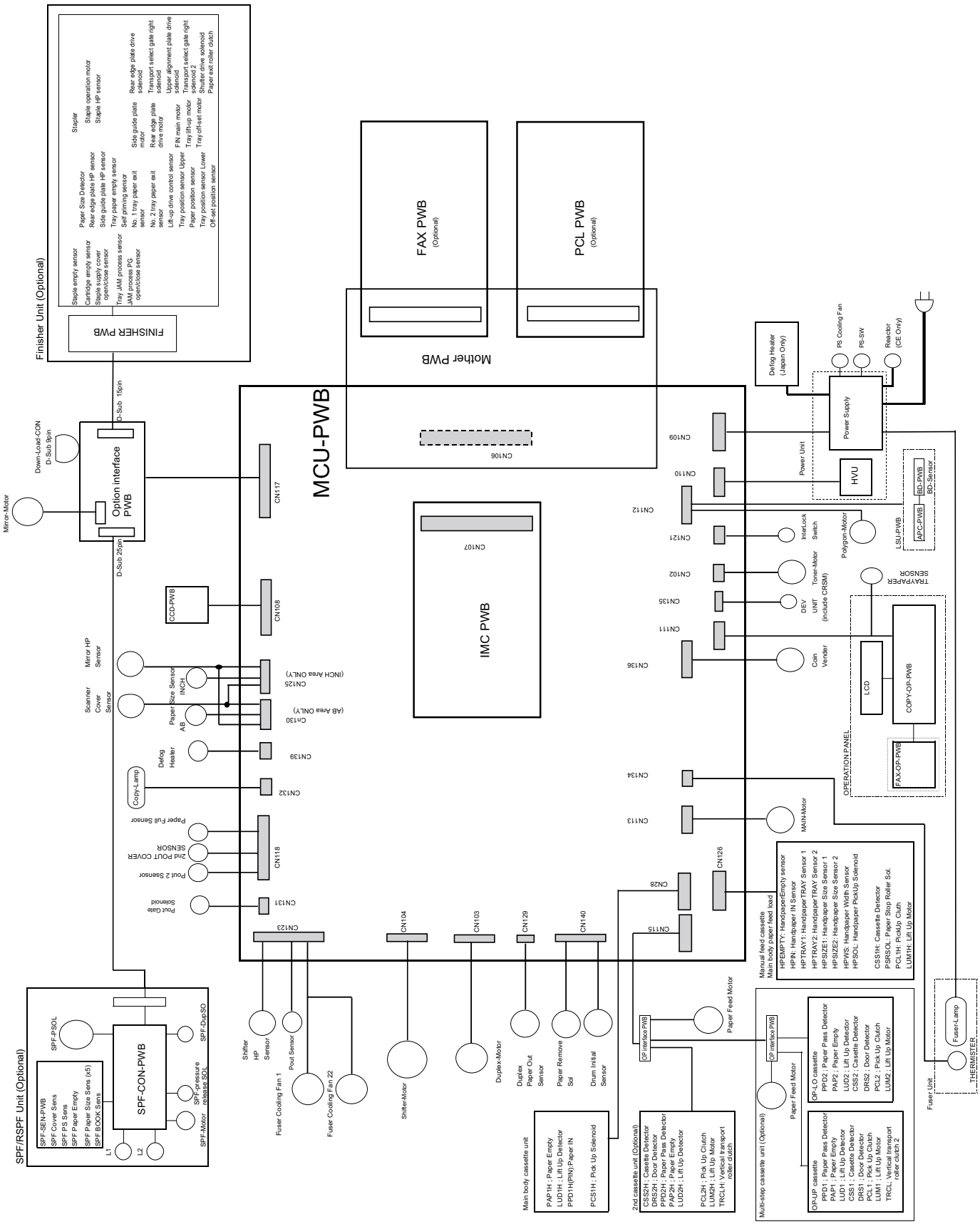
   When using the optional desk, be sure to fix the adjuster and lock the casters.

[2] SYSTEM CONFIGURATION

1. Structure

A. Hardware

Block diagram



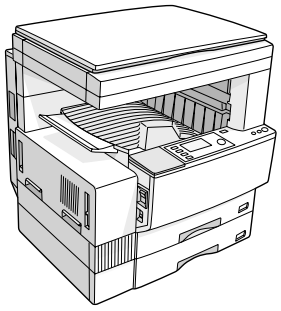
2. System outline (Options)

Option		Main unit model		NOTE
Item	Model	AR-235	AR-275	
Platen cover	AR-VR3	Y	Y	
Reversing single pass feeder	AR-RP3	Y	Y	
Single pass feeder	AR-SP4	Y	Y	
500-sheet paper feed unit	AR-D11	Y	Y	
2X500-sheet paper feed unit	AR-D12	Y	Y	
Job separator tray kit	AR-TR3	Y	Y	
Finisher	AR-FN5	Y	Y	
Facsimile expansion kit	AR-FX4	Y*1	Y*1	∗1: FAX board option available only for SEC/SECL/SEEG/SEF/SUK/SCA/SCNZ
Fax memory 2MB	AR-MM5	Y	Y	
4MB	AR-MM6	Y	Y	
8MB	AR-MM7	Y	Y	
Printer expansion kit	AR-P11	Y	Y	When the printer board is set up on the machine, the function of duplex can be automatically detected on printer mode.
Print server card	AR-NC5J	Y	Y	
Network scanner expansion kit	AR-NS2	Y	Y	
Bar code font kit	AR-PF1	Y	Y	
PS3 expansion kit	AR-PK1	Y	Y	

Y: Installable

For details of the options, refer to the Service Manual of each option.

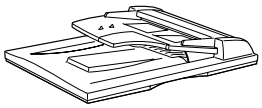
(1) Main units



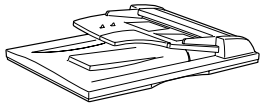
AR-235/275

(2) Options

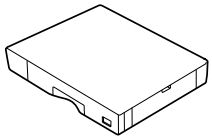
AR-VR3
Platen cover



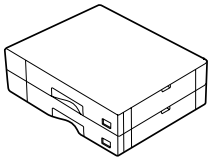
AR-RP3
Reversing single pass feeder



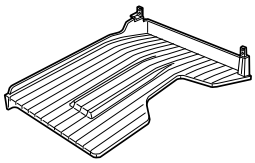
AR-SP4
Single pass feeder



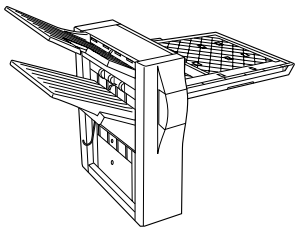
AR-D11
500-sheet paper feed unit



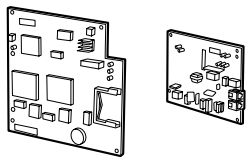
AR-D12
2X500-sheet paper feed unit



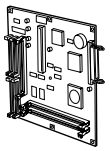
AR-TR3
Job separator tray kit



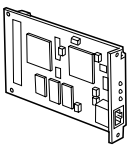
AR-FN5
Finisher



AR-FX4
Facsimile expansion kit



AR-P11
Printer expansion kit



AR-NC5J
Print server card

AR-MM5/MM6/MM7
2/4/8MB Fax memory

AR-NS2
Network scanner expansion kit

AR-PF1
Bar code font kit

AR-PK1
PS3 expansion kit

(3) Expanded memory for IMC, PCL (Advisable)

Maker	Product name	Capacity
Memory Card Technology	DM864VS65804X-7AG	64MByte
	DM864VS65804X-75G	
	DM1665VS65804X-7AG	128MByte
	DM1665VS65804X-75G	
Kingston Technology	KVR100X64C2/64	64MByte
	KVR133X64C3/128	128MByte

Maker	Product name	Capacity
Viking Components	VIK4642CL2	32MByte
	VIK8641CL2	64MByte
	VIK6642CL2	128MByte

[3] SPECIFICATIONS

1. Basic specifications

(1) Type

Machine Type	Desktop type

(2) Target users

Average	10,000 to 13,000 sheets/month
Max.	50,000 sheets/month

(3) External dimensions

Packaged	780 (W) × 760 (D) × 840 (H)mm
Body	623 (W) × 585.5 (D) × 640.5 (H)mm

(4) Weight

	AR-235/275
Packaged	About 55.95 kg
Copier body	42.5 kg

(5) Machine life

800,000 sheets or 5 years

2. Operation specifications

A. Common operation

(1) Warm up time

After turned on	Under 40 seconds
Recovery from power-save mode	Under 10 seconds
Recovery from paper jam	10 sec.

(2) Jam recovery time

About 10sec (Leaving the machine for 60 sec after opening the door, standard condition, polygon stop.)

B. Copy mode

(1) Document size

Max. document size	A3 paper (11" × 17")

(2) Picture quality mode

Picture quality mode	Density adjustment step	Toner save mode
Auto mode	1 step	Selectable
Character mode	5 steps	Selectable
Text/Photo mode	5 steps	Selectable
Photo mode	5 steps	—
Super Photo mode	5 steps	—

(3) Copy magnification ratio

• Normal mode

Copy magnification ratio	Magnification range/fixed magnification
Zoom width	25 to 400% (50 to 200% for SPF/RSPF)
Fixed magnification mode	AB Series: 25, 50, 70, 81, 86, 100, 115, 122, 141, 200, 400% 5R+5E (50, 70, 81, 86, 100, 115, 122, 141 and 200% for SPF/RSPF) Inch Series: 25, 50, 64, 77, 95, 100, 121, 129, 141, 200, 400% 5R+5E (50, 64, 77, 95, 100, 121, 129, 141 and 200% for SPF/RSPF)
Independent magnification width	25 to 400% for horizontal/vertical (50 to 200% for SPF/RSPF)

• 1200 dpi mode

Copy magnification ratio	Magnification range/fixed magnification
Zoom width	50 to 200% (50 to 141% for SPF/RSPF)
Fixed magnification mode	AB Series: 50, 70, 81, 86, 100, 115, 122, 141, 200% 4R+4E (50, 70, 81, 86, 100, 115, 122 and 141% for SPF/RSPF) Inch Series: 50, 64, 77, 95, 100, 121, 129, 141, 200% 4R+4E (50, 764, 77, 95, 100, 121, 129 and 141% for SPF/RSPF)
Independent magnification width	50 to 200% for horizontal/vertical (50 to 141% for SPF/RSPF)

Magnification precision	Normal copy: 100%±1.0% Enlargement copy: Set magnification ±1.0% Reduction copy: Set magnification ±1.0%

(4) Job speed

a. First Copy Time

Normal	Less than 4.8 seconds (when the single copy)

b. Multi copy speed (sheets/minute)

• Copy magnification (Normal copy)

Document Size	AR-235		AR-275	
	600 dpi	1200 dpi	600 dpi	1200 dpi
A3	12	7.5	15	7.5
B4	14	8.5	17	8.5
A4 (Horizontal feed)	23	13.5	27	13.5
A4 (Vertical feed)	16	9	18	9
B5 (Horizontal feed)	23	13.5	27	13.5
B5 (Vertical feed)	18	10.5	21	10.5
11" × 17"	12	7.5	15	7.5
8-1/2" × 14"	13	8	16	8
8-1/2" × 13"	14	8.5	17	8.5
8-1/2" × 11" (Horizontal feed)	23	13.5	27	13.5
8-1/2" × 11" (Vertical feed)	16	9	18	9
A5/INV	23	13.5	27	13.5

∗ The slowest speed is listed in enlargement/reduction copy.

∗ Single-side copy

• Copy magnification (Reduction copy (50% to 99%))

Document Size	AR-235		AR-275	
	600 dpi	1200 dpi	600 dpi	1200 dpi
A3	12	7.5	15	7.5
B4	14	8.5	17	8.5
A4 (Horizontal feed)	23	13.5	27	13.5
A4 (Vertical feed)	16	9	18	9
B5 (Horizontal feed)	23	13.5	27	13.5
B5 (Vertical feed)	18	10.5	21	10.5
11" × 17"	12	7.5	15	7.5
8-1/2" × 14"	13	8	16	8
8-1/2" × 13"	14	8.5	17	8.5
8-1/2" × 11" (Horizontal feed)	23	13.5	27	13.5
8-1/2" × 11" (Vertical feed)	16	9	18	9
A5/INV	23	13.5	27	13.5

∗ The slowest speed is listed in enlargement/reduction copy.

∗ Single-side copy

• Copy magnification (Enlargement copy (100% to 200%))

Document Size	AR-235		AR-275	
	600 dpi	1200 dpi	600 dpi	1200 dpi
A3	12	7.5	15	7.5
B4	14	8.5	17	8.5
A4 (Horizontal feed)	23	13.5	27	13.5
A4 (Vertical feed)	16	9	18	9
B5 (Horizontal feed)	23	13.5	27	13.5
B5 (Vertical feed)	18	10.5	21	10.5
11" × 17"	12	7.5	15	7.5
8-1/2" × 14"	13	8	16	8
8-1/2" × 13"	14	8.5	17	8.5
8-1/2" × 11" (Horizontal feed)	23	13.5	27	13.5
8-1/2" × 11" (Vertical feed)	16	9	18	9
A5/INV	23	13.5	27	13.5

∗ The slowest speed is listed in enlargement/reduction copy.

∗ Single-side copy

(5) Max. multi-copy (print) quantity

999 sheets

(6) Picture quality

a. Image process

Picture quality mode	Image process (Software)
Auto mode	• 2 gradations • Area separation • Error diffusion
Text mode	
Text/Photo mode	
Photo mode	
Super Photo mode	Dither

b. Toner save mode

Toner save percentage	10%

c. Zoom method

Main scanning direction	Performed through image processing
Sub scanning direction	Performed by image processing and changing scanning speed

d. Resolution

• Read

Main scanning direction		Sub scanning direction	
Basic resolution	Virtual resolution	Basic resolution	Virtual resolution
400 dpi	—	400 dpi	—

• Write

Main scanning direction		Sub scanning direction	
Basic resolution	Virtual resolution	Basic resolution	Virtual resolution
600 dpi	1200 dpi	600 dpi	1200 dpi

Copy magnification ratio	Position	
	Center	Corners
25% to 49%	—	—
50% to 69%	3.2 line/mm	2.8 line/mm
70% to 94%	3.6 line/mm	3.2 line/mm
95% to 105%	5.0 line/mm	4.5 line/mm
106% to 141%	5.0 line/mm	4.5 line/mm
142% to 400%	5.0 line/mm	4.5 line/mm

e. Gradation

Read	256 gradations
Write	2 gradations

3. Engine specifications

A. Operation and display section

Display unit	LED display system
Operation system	Button switch system

B. Paper feed, transport, paper exit section

(1) Paper feed ability

Paper feed section	2 cassettes + multi manual feed
Paper feed capacity	500×2+100
Document Size	AB Series: A3 to A6R Inch Series: 11"×17" to 8.5"×5.5"
Remaining detection	Cassette section: empty detection only available Manual paper feed section: empty detection only available
Remarks	—

• Details of paper feed section

Capacity	—
Paper weight	56 to 80 g/m² (15 to 21.3 lbs)
Document Size	AB Series: A3/B4/A4/A4R/B5/B5R/A5 Inch Series: 8.5×11/8.5×14/11×17/8.5×13/8.5×11R/8.5×5.5
Paper kind	Standard paper (56 to 80 g/m²), special paper
Special paper	Reproduction paper
Paper size selection	User operation (LCD panel operation)
Slide switch	—
Cassette attachment/detachment	Yes
Remarks	A5, B5, 8.5 x 5.5 (only for upper cassette) B5 is not applicable to lower cassette (2nd stage).

• Manual feed section

Capacity	100 sheets (52g to 80g/m²)
Paper weight	52 to 128 g/m² (14 to 34.1 lbs)
Document Size	AB Series: A3 to A6R Inch Series: 11"×17" to 8.5"×5.5"
Paper kind	Multi feed: Standard paper (52 to 80 g/m²), special paper (Reproduction paper/OHP/label paper/postcard/envelope) Single feed: Standard paper (52 to 128 g/m²), special paper (Reproduction paper/OHP/label paper/postcard/envelope)
Size detection	Yes
Guide display	A3/A4,11,B4/B5,8.5,A4R/A5,B5R,A5R,5.5

∗ When poor image quality is resulted by the use of OHP sheet, adjust with SIM 44-34.

(2) Finishing ability

Paper exit section	Paper exit tray (1 tray)
Capacity	500 sheets

(3) Job separator exit tray (AR-TR3)

a. Condition

In case of Optional function (printer, FAX) is set up as MFD.

b. Simultaneous wrapping in kit

Job separator tray Setting manual book

c. Simultaneous wrapping

Setting manual book

d. Function

This exit tray is set up above main exit tray, and can separate copier exit, printer exit and FAX exit.

e. Many of tray

1 (this tray can not set up more than 2)

f. Separator system

by control of main machine

g. Exit paper size

Upper exit tray (Job separator tray)	AB system	A3 to A6
	Inch system	11 x 17 to 8.5 x 5.5
Lower exit tray (Main machine exit tray)	AB system	A3 to A6
	Inch system	11 x 17 to 8.5 x 5.5

h. Exit paper weight

52 to 128g/m^2 (14 to 34.1lbs)

i. Paper pass

center (same as main unit)

j. Exit area/finishing

Upper exit tray (Job separator tray)	Face down
Lower exit tray (main machine exit tray)	Face down

k. Power supply

Power supply	DC 24V (from main machine)
Power consumption	5.6W

l. Method of movement

with original motor (not with main machine)

m. Machine weight

0.6 kg

n. Exit capacity

Upper exit tray (Job separator)	100 sheets
Lower exit tray (main machine exit tray)	500 sheets (550 sheets)

o. Tray full detector

Upper exit tray (Job separator)	Yes
Lower exit tray (main machine exit tray)	No

p. Concept of function

Upper exit tray (Job separator)	FAX/Printer (This setting can be done by users.)
Lower exit tray (main machine exit tray)	Copy/Printer/FAX (This setting can be done by users.)

q. Reliance

MCBJ	60k
MCBF	10k

r. Main color of cabinet

Frosty white

s. Setting

to be easy setting

C. Optical (Image scanning) section

(1) Type

Flat-bed type/monochrome

(2) Document reference position

Rear left reference

(3) Resolution

Main scanning direction		Sub scanning direction	
Basic resolution	Virtual resolution	Basic resolution	Virtual resolution
400 dpi	—	400 dpi	—

(4) Gradation

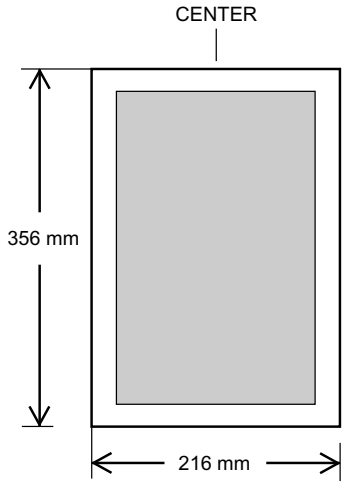
256 gradations (8-bit)

(5) Original size/Scanning area

a. Max. original size

A3 paper (11" × 17")

b. Scanning area



(6) Scanning speed

122mm/sec (600 dpi: magnification ratio 100%) 61mm/sec (1200 dpi: magnification ratio 100%)

(7) Light source (lamp)

Type	Xenon
Drive voltage	1.5 kV

(8) Read sensor

Type	Reduction optical system image sensor (CCD)
	Monochrome

D. Scanner (exposure) section

(1) Resolution

Main scanning direction	Sub scanning direction
600 dpi	600 dpi

(2) Gradation

2 gradations

(3) Laser unit specifications

r.p.m.	28,800 rpm
Mirror surfaces	6 faces
Laser power	0.4mW/600dpi, 0.2mW/1200dpi
Laser beam size	60μ (Main scan) x 70μ (Sub scan)
Laser wave length	785nm

E. Image process section

Imaging speed		600 dpi : 122 mm/sec. 1200 dpi : 61 mm/sec.
Photo conductor	Type	OPC drum (dia. 30mm)
	LIFE	50,000 sheets
Toner	Type	Developer (Black)
	LIFE	25,000 sheets (Toner, life: 25k, Developer life: 50k)
Charge	System	(–) DC scorotron (saw tooth)
	Voltage	560μA constant electric current
Transfer	System	Transfer roller
	Voltage	18μA (electric current)
Exposure		Xenon lamp
Developing		Dry, 2-component magnetic brush development
Separation		(–) DC corotron
Discharge		—
Cleaning		Blade

F. Fusing

Type		Heat roller
Lamp	Type	Halogen lamp
	Voltage	100V
	Power consumption	1000W
Fusing temperature		185° (600 dpi)
		160° (1200 dpi)
Heat roller		Teflon coated roller
Pressure roller		Silicone rubber roller with roentgerized cube
Separation system		Natural separation (with pawl)

G. DRIVE

Drive section	Motor
Main motor	DC brushless motor

4. Safety and environmental protection standards

(1) Safety and environmental protection standards

Item	Standard name	Country name
Safety standards	S mark	Japan
Radio wave noise standard	VCCI class A	Japan
	VCCI class B	Taiwan
EnergyStar		World-wide

(2) Ozone level

Ozone	Less than 0.02mg/m³
Dust	Less than 0.075mg/m³

(3) Noise level

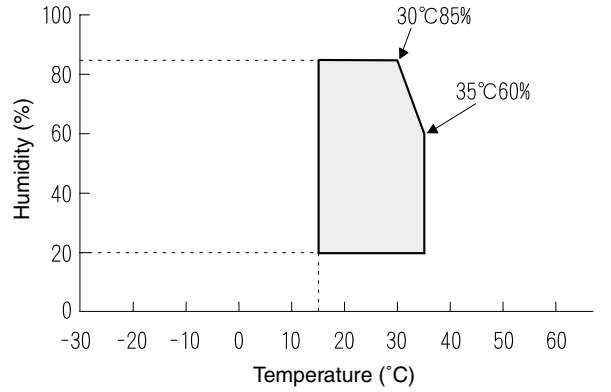
Operating	Less than 63dB
On standby	Less than 40dB

5. Environment conditions

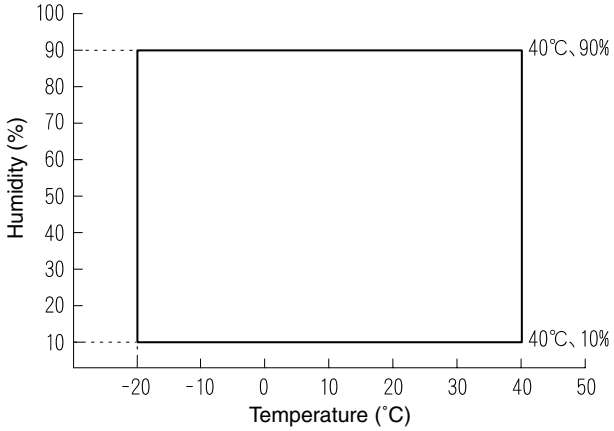
(1) Space required

Folded multi manual feed	623 (W) × 585.5 (D) mm
Open multi manual feed	889 (W) × 585.5 (D) mm

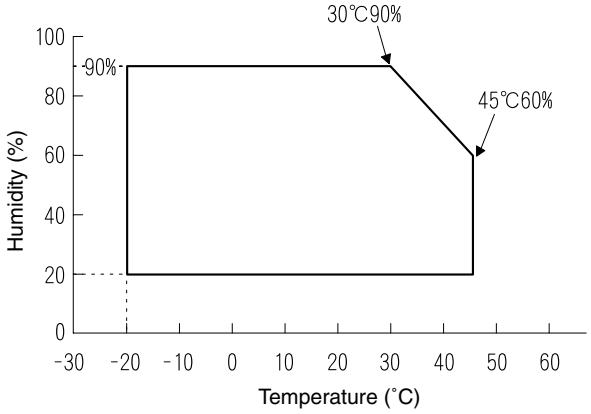
(2) Operating ambient conditions



(3) Ambient storage conditions



(4) Ambient conditions for transporting



(5) Atmospheric pressure

595 mmHg or above

(6) Standard temperature and humidity

Temperature	20 to 25°C
Humidity	65±5%RH

[4] CONSUMABLE PARTS

1. List

A. SEC/LAG

No.	Item	Content	Life	Model name	Remarks
1	Toner CA (black) w/IC	Toner ×10 Vinyl bag ×10	25K (×10)	AR-270MT	Life setting by A4 (8.5"×11") 6% document MT=NT*10
2	Developer	Developer ×10 (Developer; Net weight 500g)	50K (×10)	AR-270MD	MD=ND*10
3	Drum kit	Drum ×1	50K	AR-270DR	
4	Upper heat roller kit	Upper Heat Roller ×1 Fusing gear ×1 Upper heat roller bearing ×2 Fusing separation pawl (upper) ×4	150K	AR-270UH	
5	Lower heat roller kit	Lower Heat Roller ×1 Fusing separation pawl (lower) ×4 Fusing busing (lower) ×2	300K	AR-270LH	
6	100K maintenance kit	Drum Separation Unit ×2 Transfer roller unit ×1	100K	AR-270KA1	
7	MC unit	MC unit ×10	50K (×10)	AR-270MC	
8	Cleaner Blade	Cleaner Blade ×10	50K (×10)	AR-270CB	
9	Drum frame unit	Drum frame unit ×1	200K	AR-270DU	* The life of the toner reception seat welded to the drum frame is 200K, and it can be used up to 4 times. (Supplied as a drum frame unit.) * Drum frame unit contains all the drum unit parts excluding Drum and Drum fixing plate.
10	Staple Cartridge	Staple Cartridge ×3	3000 staples ×3	AR-SC1	
11	Transfer roller unit	Transfer roller unit ×1	100K	AR-270TX	
12	Paper feed roller kit	Paper feed roller kit ×1	100K	AR-270IR	Paper feed roller, pickup roller, separation sheet
13	Fusing unit	Fusing unit ×1	150K	AR-270FU	

* The other maintenance parts than the above are supplied as service parts.

B. SECL

No.	Item	Content	Life	Model name	Remarks
1	Toner CA (black) w/IC	Toner ×10 Vinyl bag ×10	25K (×10)	AR-270MT	Life setting by A4 (8.5"×11") 6% document MT=NT*10
2	Developer	Developer ×10 (Developer; Net weight 500g)	50K (×10)	AR-270MD	MD=ND*10
3	Drum kit	Drum ×1	50K	AR-270DR	
4	Upper heat roller kit	Upper Heat Roller ×1 Fusing gear ×1 Upper heat roller bearing ×2 Fusing separation pawl (upper) ×4	150K	AR-270UH	
5	Lower heat roller kit	Lower Heat Roller ×1 Fusing separation pawl (lower) ×4 Fusing busing (lower) ×2	300K	AR-270LH	
6	100K PM kit	Drum Separation Unit ×2 Transfer roller unit ×1 DV blade ×1 Side seal F ×1 Side seal R ×1	100K	AR-270KA	
7	MC unit	MC unit ×10	50K (×10)	AR-270MC	
8	Cleaner Blade	Cleaner Blade ×10	50K (×10)	AR-270CB	
9	Drum frame unit	Drum frame unit ×1	200K	AR-270DU	* The life of the toner reception seat welded to the drum frame is 200K, and it can be used up to 4 times. (Supplied as a drum frame unit.) * Drum frame unit contains all the drum unit parts excluding Drum and Drum fixing plate.

* The other maintenance parts than the above are supplied as service parts.

C. Europe affiliates/East Europe/SEEG/SUK/SCA/SCNZ/SEA/SEES/SEZ/SEIS/SEB/SEN/SEF/SMEF/Russia/ Middle East/Africa/CIS

No.	Item	Content	Life	Model name	Remarks
1	Toner CA (black) w/IC	Toner ×10 Vinyl bag ×10	25K (×10)	AR-270LT	Life setting by A4 (8.5"×11") 6% document LT=T*10
2	Developer	Developer ×10 (Developer; Net weight 500g)	50K (×10)	AR-270LD	LD=DV*10
3	Drum kit	Drum ×1	50K	AR-270DM	
4	Upper heat roller kit	Upper Heat Roller ×1 Fusing gear ×1 Upper heat roller bearing ×2 Fusing separation pawl (upper) ×4	150K	AR-270UH	
5	Lower heat roller kit	Lower Heat Roller ×1 Fusing separation pawl (lower) ×4 Fusing busing (lower) ×2	300K	AR-270LH	
6	100K PM kit	Drum Separation Unit ×2 Transfer roller unit ×1 DV blade ×1 Side seal F ×1 Side seal R ×1	100K	AR-270KA	
7	MC unit	MC unit ×10	50K (×10)	AR-270MC	
8	Cleaner Blade	Cleaner Blade ×10	50K (×10)	AR-270CB	
9	Drum frame unit	Drum frame unit ×1	200K	AR-270DU	* The life of the toner reception seat welded to the drum frame is 200K, and it can be used up to 4 times. (Supplied as a drum frame unit.) * Drum frame unit contains all the drum unit parts excluding Drum and Drum fixing plate.
10	Staple Cartridge	Staple Cartridge ×3	3000 staples ×3	AR-SC1	
11	Transfer roller unit	Transfer roller unit ×1	100K	AR-270TX	
12	Paper feed roller kit	Paper feed roller kit ×1	100K	AR-270IR	Paper feed roller, pickup roller, separation sheet
13	Fusing unit	Fusing unit ×1	150K	AR-270FU	

* The other maintenance parts than the above are supplied as service parts.

D. Special country/Taiwan

No.	Item	Content		Life	Model name	Remarks
1	Toner CA (black) w/IC	Toner Vinyl bag	×10 ×10	25K (×10)	AR-270CT	Life setting by A4 (8.5"×11") 6% document CT=ST*10
2	Developer	Developer (Developer; Net weight 500g)	×10	50K (×10)	AR-270CD	CD=SD*10
3	Drum kit	Drum	×1	50K	AR-270DR	
4	Upper heat roller kit	Upper Heat Roller Fusing gear Upper heat roller bearing Fusing separation pawl (upper)	×1 ×1 ×2 ×4	150K	AR-270UH	
5	Lower heat roller kit	Lower Heat Roller Fusing separation pawl (lower) Fusing busing (lower)	×1 ×4 ×2	300K	AR-270LH	
6	100K PM kit	Drum Separation Unit Transfer roller unit DV blade Side seal F Side seal R	×2 ×1 ×1 ×1 ×1	100K	AR-270KA	
7	MC unit	MC unit	×10	50K (×10)	AR-270MC	
8	Cleaner Blade	Cleaner Blade	×10	50K (×10)	AR-270CB	
9	Drum frame unit	Drum frame unit	×1	200K	AR-270DU	* The life of the toner reception seat welded to the drum frame is 200K, and it can be used up to 4 times. (Supplied as a drum frame unit.) * Drum frame unit contains all the drum unit parts excluding Drum and Drum fixing plate.
10	Staple Cartridge	Staple Cartridge	×3	3000 staples ×3	AR-SC1	
11	Transfer roller unit	Transfer roller unit	×1	100K	AR-270TX	
12	Paper feed roller kit	Paper feed roller kit	×1	100K	AR-270IR	Paper feed roller, pickup roller, separation sheet
13	Fusing unit	Fusing unit	×1	150K	AR-270FU	

* The other maintenance parts than the above are supplied as service parts.

E. Asia affiliates /Asia agent/STCL/SRH/SRS/SRSSC/SBI

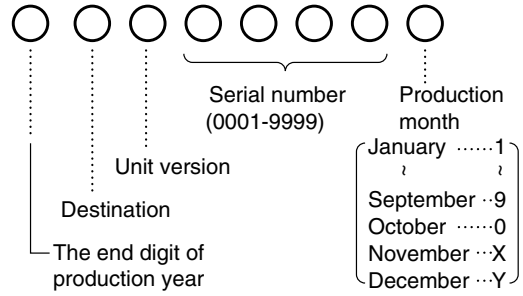
No.	Item	Content		Life	Model name	Remarks
1	Toner CA (black) w/IC	Toner Vinyl bag	×10 ×10	25K (×10)	AR-270CT	Life setting by A4 (8.5"×11") 6% document CT=ST*10
2	Developer	Developer (Developer; Net weight 500g)	×10	50K (×10)	AR-270CD	CD=SD*10
3	Drum kit	Drum	×1	50K	AR-270DR	
4	Upper heat roller kit	Upper Heat Roller Fusing gear Upper heat roller bearing Fusing separation pawl (upper)	×1 ×1 ×2 ×4	150K	AR-270UH	
5	Lower heat roller kit	Lower Heat Roller Fusing separation pawl (lower) Fusing busing (lower)	×1 ×4 ×2	300K	AR-270LH	
6	100K PM kit	Drum Separation Unit Transfer roller unit DV blade Side seal F Side seal R	×2 ×1 ×1 ×1 ×1	100K	AR-270KA	
7	MC unit	MC unit	×10	50K (×10)	AR-270MC	
8	Cleaner Blade	Cleaner Blade	×10	50K (×10)	AR-270CB	
9	Drum frame unit	Drum frame unit	×1	200K	AR-270DU	* The life of the toner reception seat welded to the drum frame is 200K, and it can be used up to 4 times. (Supplied as a drum frame unit.) * Drum frame unit contains all the drum unit parts excluding Drum and Drum fixing plate.
10	Staple Cartridge	Staple Cartridge	×3	3000 staples ×3	AR-SC1	

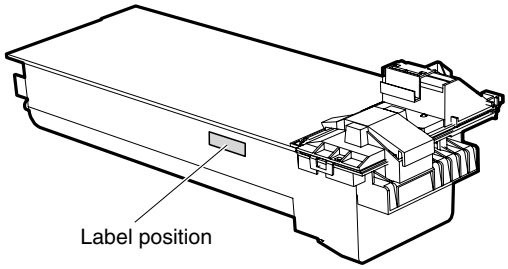
* The other maintenance parts than the above are supplied as service parts.

2. Production number identification

<TD cartridge>

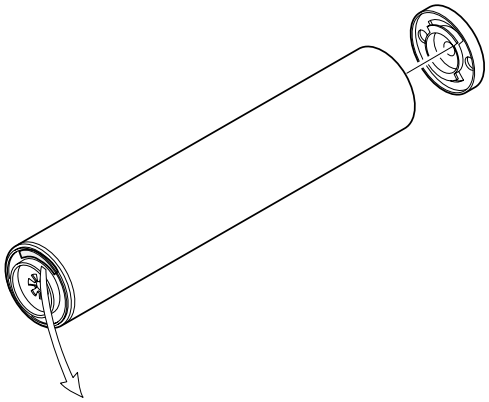
The label on the TD cartridge shows the date of production.





<Drum>

The laser print indicates the date (year, month, day) of production.

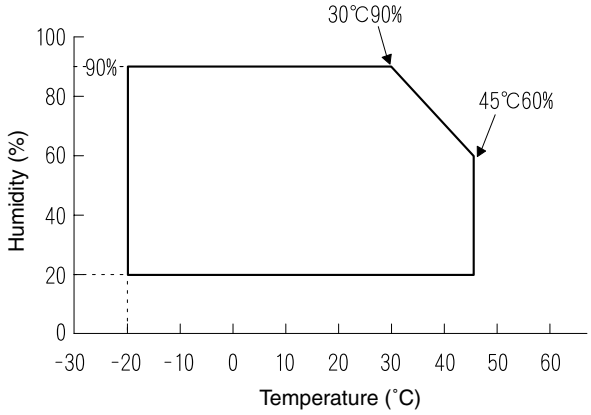


1	2	3

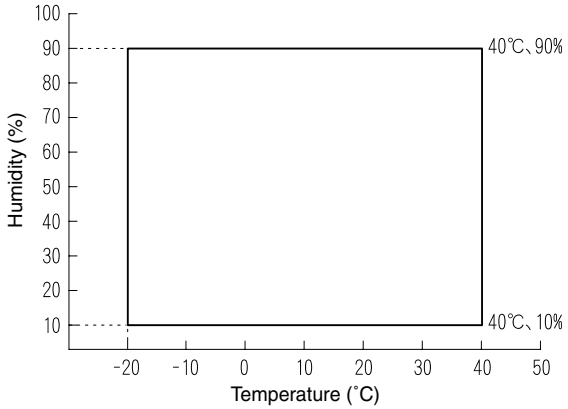
1 The last digit of the production year.
2 The prodoction month.
X stands for October, Y November, and Z December.
3 The production sub lot.

3. Environment conditions

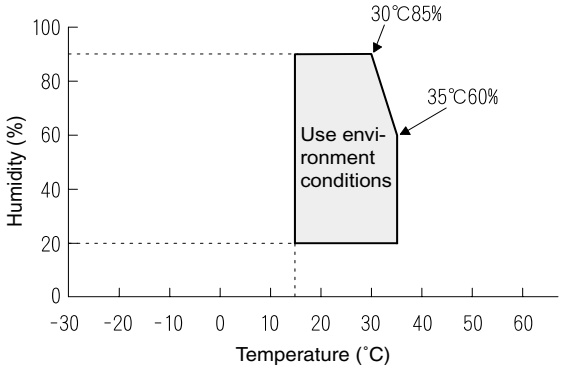
A. Ambient conditions for transporting



B. Ambient storage conditions (sealed)



C. Operating ambient conditions



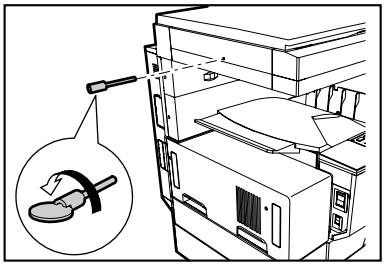
4. Life (packed conditions)

Photoconductor drum (36 months from the production month)
Developer, toner (24 months from the production month)

[5] UNPACKING AND INSTALLATION

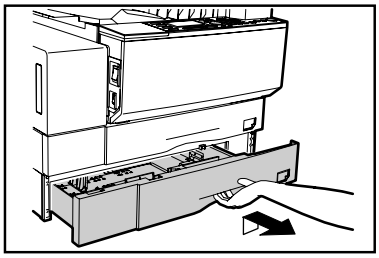
1. Removal of protective material and fixing screw

1) Remove all tapes, then open the document cover and remove the protective material of sheet shape.
2) Remove the fixing screw using a coin.
   The fixing screw is required when transporting the machine. Keep it in the tray. (Refer to the later description.)

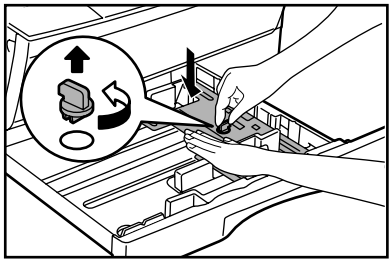


2. Removal and storage of fixing pin

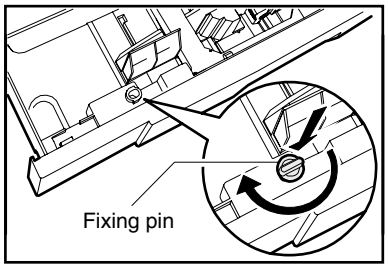
1) Lift the knob and gently pull out the tray.

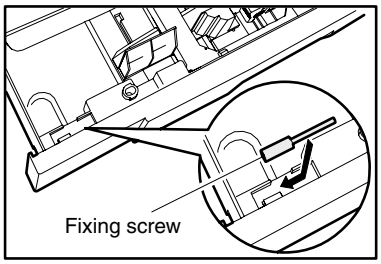


2) Hold the paper pressure plate and turn the fixing pin in the arrow direction.



3) Store the removed fixing pin and the fixing screw which was removed in the above procedure, together in the specified storage place in the tray.

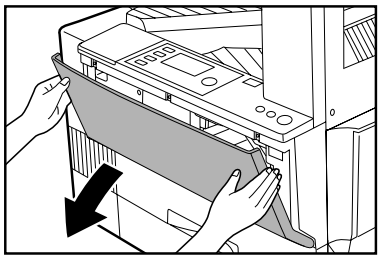




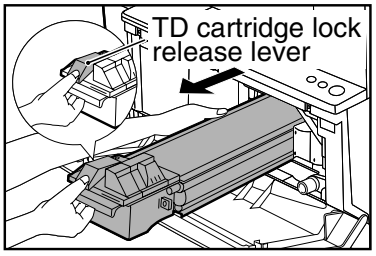
* If power is turned don without removing the fixing pin, it will be difficult to pull out the tray.

3. Developer cartridge installation

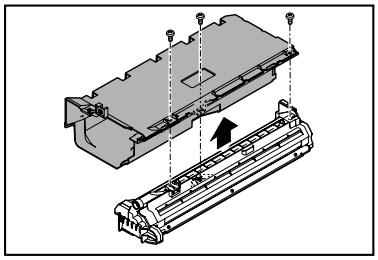
1) Hold the both sides of the front cover, and pull down to open it.



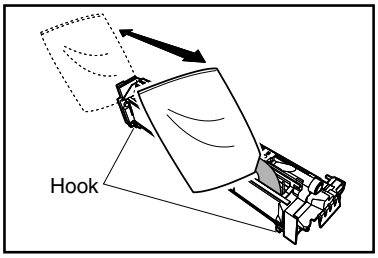
2) Loosen the screw and remove the developer cartridge.



3) Remove the developer tank from the developer cartridge.



4) Supply developer into the developer tank while rotating the MG roller.



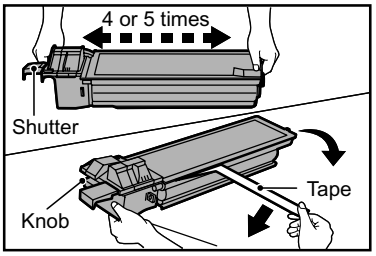
* Shake the developer bag enough before opening it.
* Check to insure that the hook is engaged in two positions.

5) Attach the developer tank to the developer cartridge.
   After supplying developer into the developer cartridge, do not tilt or shake the developer cartridge.
6) Attach the developer cartridge to the copier, and fix it with the screw.

Note: When replacing the OPC drum with a new one, be sure to clear the drum count.

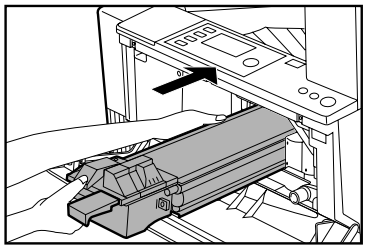
4. Toner cartridge installation

1) Shake the toner cartridge several times horizontally, and remove the tape.



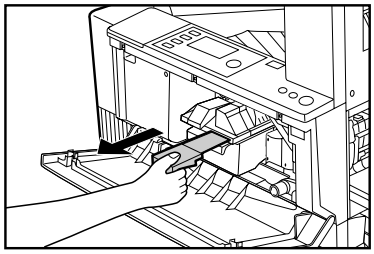
* Do not hold the shutter lever when shaking.

2) Press the lock release lever, and insert the unit completely into the copier along the guide groove. Then fix the blue screw and the locking screw.



* Dirt or dust must be removed from the toner cartridge before installing.

3) Take off the tape, and remove the shutter from the toner cartridge.



5. Toner concentration sensor level adjustment

1) Open the cover.
2) Power ON (The mechanism cannot be initialized because the cover is open.)
3) Install the developing unit with new developer in it.
4) Enter SIM 25-2.
5) Close the cover immediately before starting the operation.
6) Press the OK key to start.

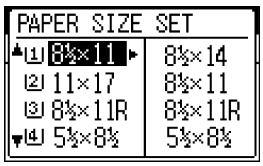
After completion of the adjustment, be sure to cancel the simulation.

Note: When replacing developer with new one, be sure to clear the developer counter.

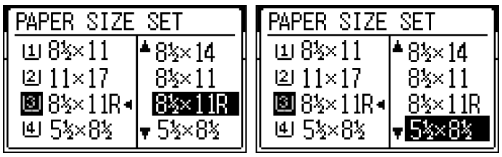
6. Paper size selection for paper feed tray

1) The paper feed trays have no paper size detection mechanism and the paper size can be selected by entry from the operation panel. The bypass tray has a paper size detection mechanism and the paper size cannot be selected from the operation panel.
2) To select the paper size from the operation panel, press the Special Function key and choose "Paper Size Enter" from the function menu to open the paper size enter screen.
   • Screen display

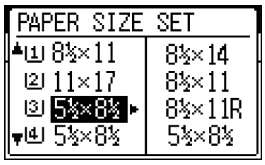
3) On the screen, all trays are indicated and the previously selected tray is highlighted. Use the Up/Down key to select the tray desired.
   • Screen display



4) After selecting the tray, press the Right cursor key to move to the paper size selection box on the right side of the screen (the highlighted size is the previously selected size). Use the Up/Down key to select the desired paper size.

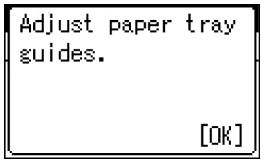


5) After selecting the paper size, press the Left cursor key to return to the left side of the screen. At that time, the selected tray indicates the paper size selected above.



Press the OK key to confirm the setting. The following message appears:

• Message (M081)



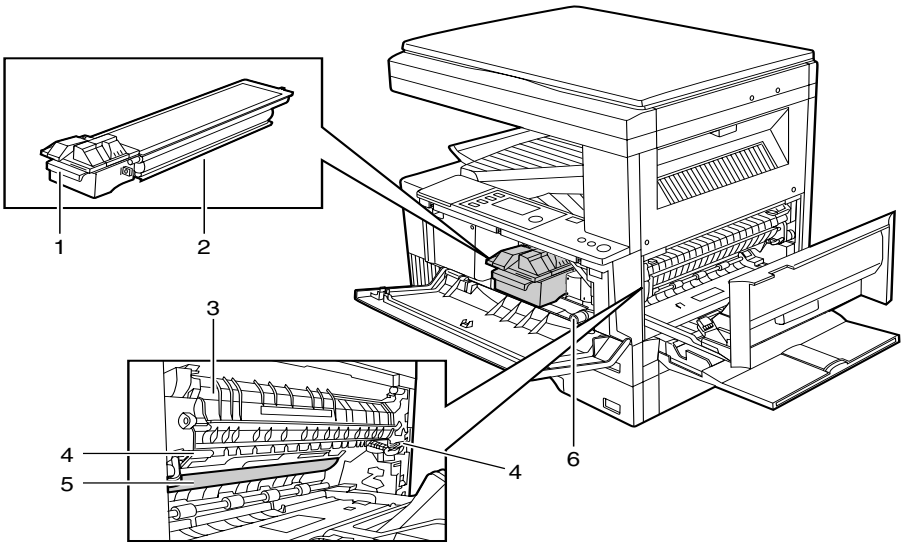
6) After the Start key is pressed, if the fed paper is different in size from the setting, the machine makes copy and then stops running with the mode retained. The following message appears for six seconds. the Start LED is ON): The tray set EXTRA size is not available for this specification.

• Message (C449)

7) If any of Trays 2 to 4 is selected, the paper sizes of A5/5.5 x 8.5 are not available (because the A5/5.5 x 8.5-sized paper cannot be fed from these trays).

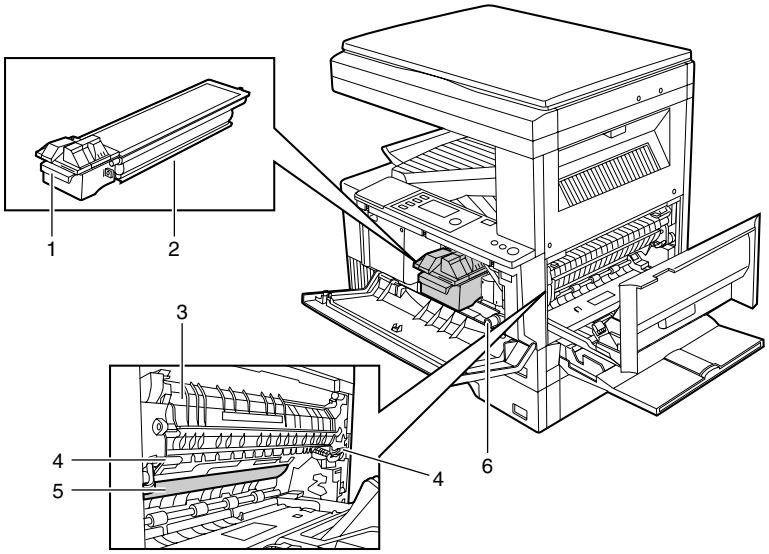
[6] EXTERNAL VIEW AND INTERNAL STRUCTURE

1. External view



No.	Name	Function/Operation
1	Platen cover (optional)	Place the original on the original table and close the platen cover before copying starts.
2	Paper output tray	Finished copies are deposited in the paper output tray.
3	Front cover	Open to remove misfeeds and for copier servicing.
4	Paper trays	Each tray holds 500 sheets of copy paper.
5	Power switch	Press to turn copier power on and off.
6	Handles	Use to move the copier.
7	Operation panel	All copier controls are located here for easy operation.
8	Original table	Place the document to be copied here.
9	Upper exit area cover	Open to remove misfeeds when an optional job separator tray kit or finisher is installed.
10	Side cover	Open to remove misfeeds.
11	Side cover handle	Lift and pull to open the side cover.
12	Bypass tray guides	Adjust to the width of the copy paper.
13	Bypass tray	Special papers (including transparency film) and copy paper can be fed from the bypass tray.
14	Bypass tray extension	Pull out when feeding large paper such as 8-1/2" x 14" and 11" x 17".

2. Internal

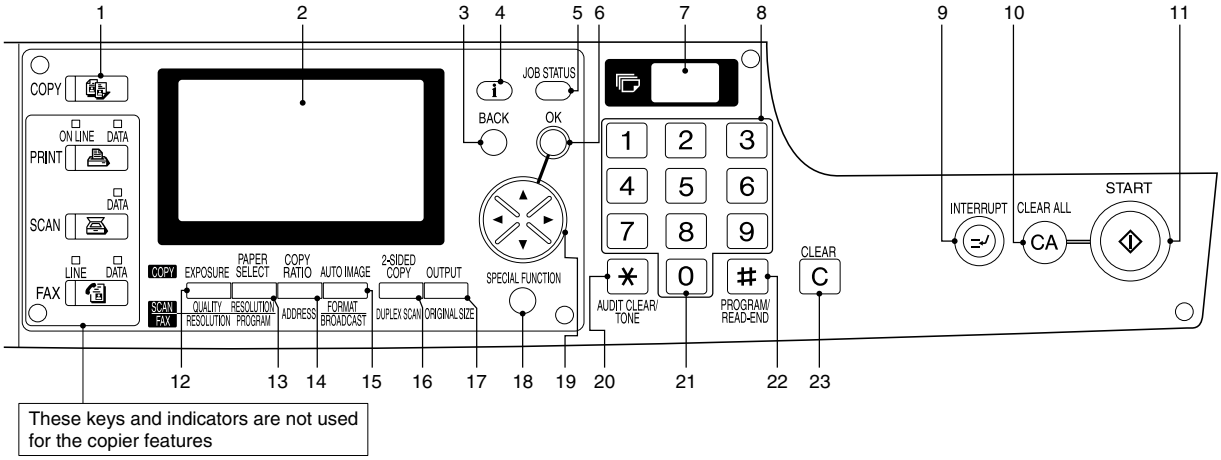


No.	Name	Function/Operation
1	Toner cartridge lock release lever	Use to unlock the toner cartridge.
2	Toner cartridge	Contains toner.
3	Paper guide	Open to remove misfed paper.
4	Fusing unit release levers	Lower to remove misfed paper.
5	Roller rotating knob	Turn to remove misfed paper.

3. Operation panel

A. Key position

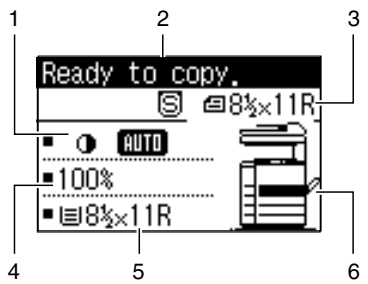
(U.S.A., Canada)



No.	Name	Function/Operation
1	COPY key and indicator	Press to select the COPY mode. Press and hold during standby to display the total output count. Quantity of toner remaining is also displayed.
2	Display	Displays information to assist the operator.
3	BACK key	Press to return the display to the previous screen.
4	Information key	Press to display the detailed description when [i] is displayed at the upper right of the display.
5	JOB STATUS key	Press to check the settings of selected functions or the status of reserved output jobs.
6	OK key	Press to register the selected setting.
7	Copy quantity display	Displays the specified copy quantity during the ready condition and displays the copy countdown as copies are made.
8	Numeric keys	Used to select the desired copy quantity.
9	INTERRUPT key and indicator	Interrupts a copy run.
10	CLEAR ALL key	Clears all selected settings and returns the copier to the initial settings.
11	START key and indicator	Copying is possible when the indicator is on. Press to start copying.
12	EXPOSURE key	Used to select the exposure modes: AUTO, TEXT, TEXT/PHOTO, PHOTO or SUPER PHOTO.
13	PAPER SELECT key	Used to manually select a paper tray.
14	COPY RATIO key	Press to select a reduction or enlargement copy ratio.
15	AUTO IMAGE key	Press for automatic copy ratio selection.
16	2-SIDED COPY key	Press to select the 1-sided to 1-sided, 1-sided to 2-sided, 2-sided to 1-sided* or 2-sided to 2-sided* copy mode. *To select the 2-sided to 1-sided or 2-sided to 2-sided copy mode, an optional RSPF must be installed.
17	OUTPUT key	Press to select the sort, group or staple sort* mode. *To select the staple sort mode, an optional finisher must be installed.
18	SPECIAL FUNCTION key	Press to select special functions.
19	Arrow keys	Press to move the highlighted item in the display.
20	AUDIT CLEAR key	Press to close an open account.
21	Zero key	Use as part of numeric keys to enter copy quantity. Press during a continuous copy run to display the number of copies completed in the current run.
22	PROGRAM/READ END key	Press to select the job memory mode. Press to finish scanning of originals and to start copying when copying from the original table.
23	CLEAR key	Press to clear the copy quantity display or press during a copy run to terminate copying.

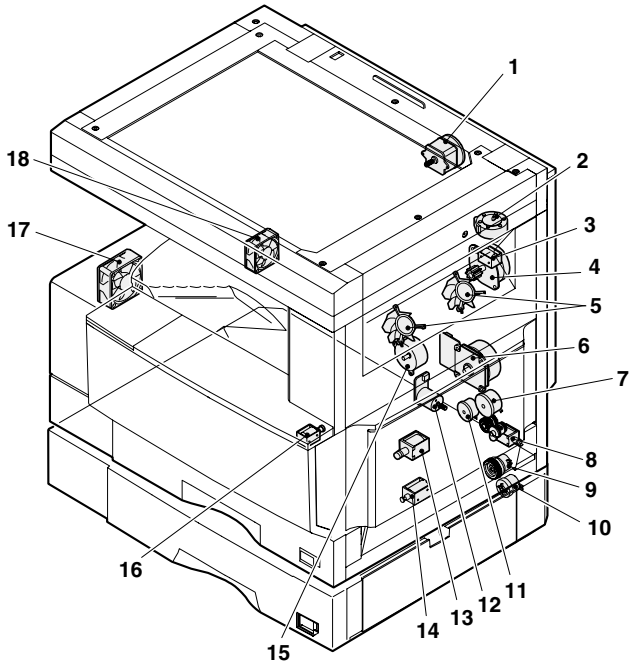
B. LCD panel

(U.S.A., Canada)



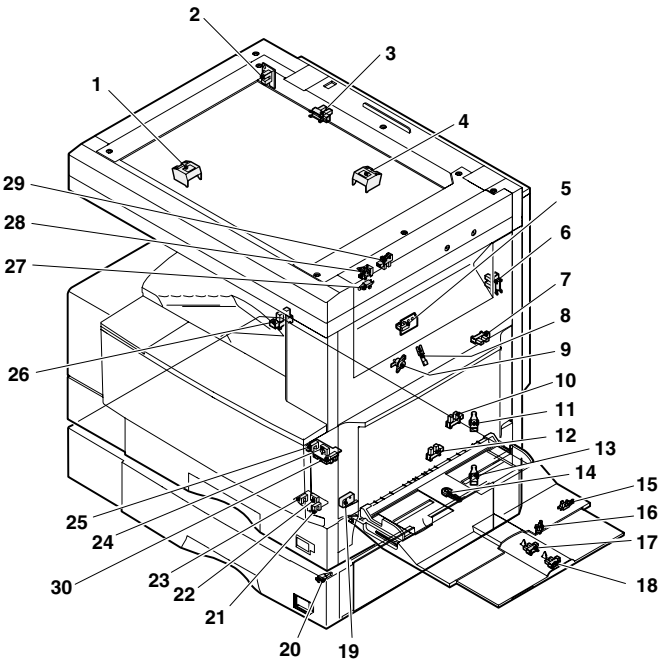
No.	Name	Function/Operation
1	Exposure display	Indicates the selected exposure mode.
2	Message display	Messages are displayed regarding copier status and operation.
3	Original size display	The original paper size is displayed.
4	Copy ratio display	Displays the copy ratios for reductions or enlargements.
5	Paper size display	Displays the selected paper size. When "AUTO" is displayed, paper size matching the original and copy ratio will be automatically selected.
6	Paper tray display	The selected paper feed location is highlighted.

4. Motor, Solenoid, Clutch



No.	Name	Code	Function and operation
1	Mirror motor	MIRM	Optical mirror base drive
2	Shifter motor	SFTM	Shifter drive
3	Paper exit gate switching solenoid	PGSOL	Paper exit gate switcher
4	Duplex motor	DPXM	Duplex paper switching and exit roller
5	Cooling fan	TFAN	Cools the inside of the unit.
6	Main motor	MM	Main drive
7	PS clutch	PSRSOL	Main unit paper feed
8	Manual paper feed solenoid		Manual paper feed solenoid
9	Manual paper feed clutch	HPSOL	Manual paper feed clutch
10	Paper feed transfer clutch		Paper feed transfer clutch
11	Paper feed clutch	PCL1H	Paper feed roller drive
12	Cassette lift-up motor	LUM1H	Cassette paper lift-up
13	Paper feed solenoid	PCS1H	Solenoid for the paper feed from the cassette
14	2nd cassette paper feed solenoid		
15	Toner motor	TM	Toner supply
16	Separation pawl solenoid	PREMSOL	Separation pawl operation solenoid
17	Exhaust fan motor	PSFAN	Cools the inside of the unit.
18	Intake fan motor		

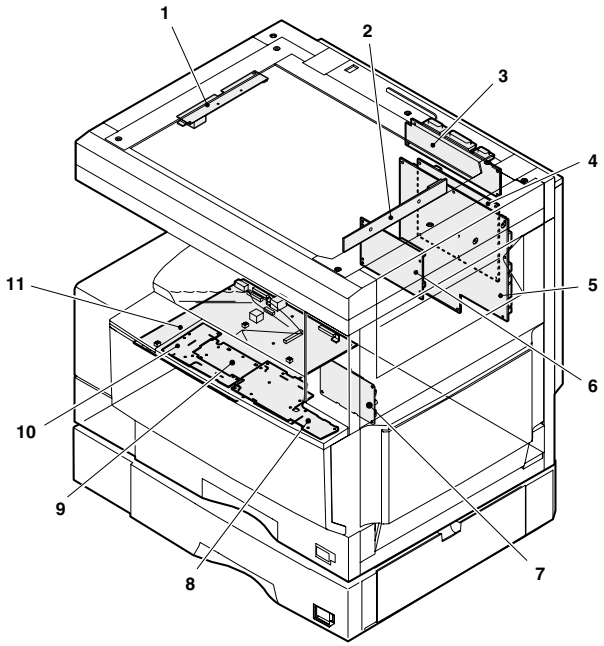
5. Sensor



No.	Name	Code	Function and operation
1	Original size sensor	DSIN0	Document size detection
2	Mirror home position sensor	MHPS	Mirror (scanner) home position detection
3	Document cover sensor	OCCOVER	Document cover open/close detection
4	Document size sensor	DSIN3	Document size detection
5	1st paper exit sensor	POUT	1st paper exit detection
6	Shifter home position sensor	SFTHP	Shifter home position sensor detection
7	Paper exit sensor (DUP side)	PDPX	Paper exit detection
8	Thermistor	RTHIN	Fusing temperature detection
9	Thermostat		Abnormal high temperature detection in the fusing section
10	Manual feed paper entry sensor	HPIN	Sensor of paper entry from the manual paper feed tray, the 2nd/multi-stage desk, or the DUP
11	1st cassette (paper tray) detection	CSS1	1st cassette (paper tray) empty detection
12	Manual feed paper empty sensor	HPEMPTY	Manual feed paper empty detection
13	2nd cassette (paper tray) detection		2nd cassette (paper tray) empty detection
14	Manual feed width detection volume	HPWS	Manual feed paper width detection
15	Manual paper feed tray empty sensor 2	HPTRAY2	Manual feed tray position detection
16	Manual paper feed tray empty sensor 1	HPTRAY1	Manual feed tray position detection
17	Manual feed length detection sensor 2	HPSIZE2	Manual feed paper length detection
18	Manual feed length detection sensor 1	HPSIZE1	Manual feed paper length detection

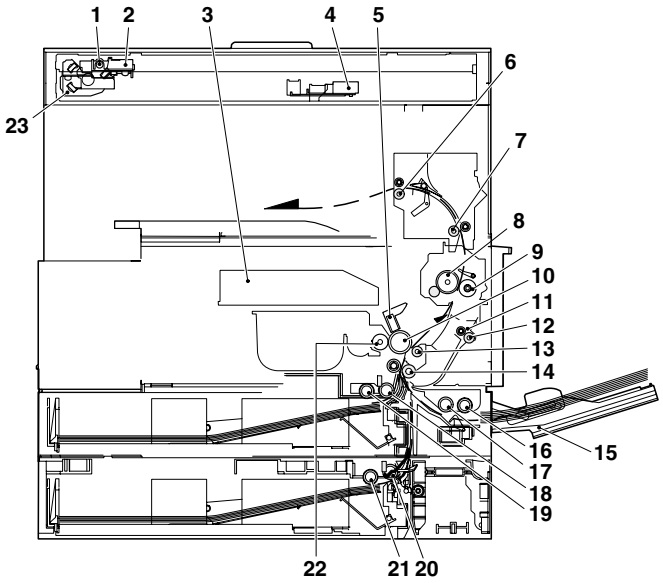
No.	Name	Code	Function and operation
19	Door switch	SW24V	Front door and side door open/close detection
20	2nd right door switch		Side door open/close detection
21	2nd cassette paper pass sensor		2nd cassette paper pass
22	2nd cassette paper upper limit detection sensor		2nd cassette paper upper limit detection
23	2nd cassette paper empty sensor		2nd cassette paper empty detection
24	1st cassette paper upper limit detection sensor	LUD1H	1st cassette paper upper limit detection
25	1st cassette paper empty sensor	PAP1H	1st cassette paper empty detection
26	Center tray peper YES/NO sensor	TRAYPAPER	Center tray peper YES/NO detection
27	Right cabinet door switch	POUTCOV	Right cabinet door open/close detection
28	2nd paper exit sensor	POUT2	2nd paper exit detection
29	2nd paper exit full detection sensor	PFULL2	2nd paper exit section full detection
30	1st cassette paper pass sensor		1st cassette paper pass

6. PWB unit



No.	Name	Function and operation
1	Inverter PWB	Copy lamp control
2	CCD PWB	For image scanning (read)
3	Option connector PWB	
4	IMC PWB	Image process
5	MCU PWB	Main unit control
6	Mother board	Connection with FAX PWB and PCL PWB
7	Tray interface PWB	2nd tray control
8	KEY/LED PWB (right side)	For the copy operation
9	LCD back light PWB	LCD control
10	KEY/LED PWB (left side)	For the FAX operation
11	Power source PWB	AC power input/DC voltage control

7. Section



No.	Name	Function and operation
1	Copy lamp	Image radiation lamp
2	Copy lamp unit	Operates in synchronization with 2nd/3rd mirror unit to radiate documents sequentially.
3	LSU unit	Converts image signals into laser beams to write on the dum.
4	Lens unit	Reads images with the lens and the CCD.
5	MC holder unit	Supplies negative charges evenly on the drum.
6	Paper exit roller	Paper exit roller
7	Transport roller	Paper transport roller
8	Upper heat roller	Fuses toner on paper. (with the teflon roller)
9	Lower heat roller	Fuses toner on paper. (with the silicone rubber roller)
10	Drum unit	Forms images.
11	DUP transport follower roller	Duplex paper transport
12	DUP transport roller	Duplex paper transport
13	Transport roller	Transfer images on the drum onto paper.
14	Resist roller	Synchronize the paper lead edge with the image lead edge.
15	Manual feed tray	Manual feed paper tray
16	Manual paper feed roller	Picks up papers in manual paper feed port.
17	Manual feed transport roller	Transports paper from the manual paper feed port.
18	1st cassette pick-up roller	Picks up paper from the cassette.
19	1st cassette paper feed roller	Transports the picked up paper to RESIST section.
20	2nd cassette pick-up roller	Picks up paper from the cassette.
21	2nd cassette paper feed roller	Transports the picked up paper to RESIST section.
22	MG roller	Puts toner on the OPC drum.
23	2nd/3rd mirror unit	Reflects the images from the copy lamp unit to the lens unit.

[7] ADJUSTMENTS, SETTING

1. List of adjustment items

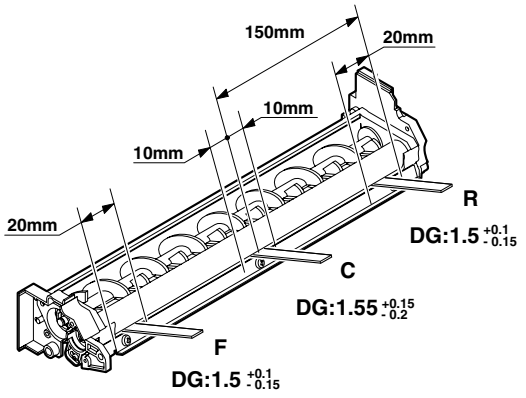
Section		Adjustment item		Adjustment procedure/SIM No.	
A	Process section	(1)	Developing doctor gap adjustment		Developing doctor gap adjustment
		(2)	MG roller main pole position adjustment		MG roller main pole position adjustment
		(3)	Developing bias voltage adjustment		SIM8-1
		(4)	Grid bias voltage adjustment (High mode)		SIM8-2
		(5)	Grid bias voltage adjustment (Low mode)		SIM8-3
B	Mechanism section	(1)	OC image lead edge position/Sub scanning magnification ratio/Original offset auto adjustment		SIM48-3
		(2)	Print start position adjustment		SIM50-5
		(3)	SPF image lead edge position adjustment		SIM50-6
		(4)	Rear edge void adjustment		SIM50-1-6
		(5)	Paper off center adjustment		SIM50-10
		(6)	Left edge void area adjustment		SIM50-1-8
		(7)	Main scanning direction (FR direction) distortion balance adjustment		No. 2/3 mirror base unit installing position adjustment
					Copy lamp unit installing position adjustment
		(8)	Sub scanning direction (scanning direction) distortion adjustment		Winding pulley position adjustment
		(9)	Main scanning direction (FR direction) distortion adjustment		Rail height adjustment
		(10)	Main scanning direction (FR direction) magnification ratio adjustment		SIM48-1-1, 48-1-2
		(11)	Sub scanning direction (scanning direction) magnification ratio adjustment	a	OC mode in copying (SIM 48-1-3)
				b	RSPF sub scanning direction magnification ratio (SIM48-1-4, 48-1-5)
		(12)	Off center adjustment (SPF mode)		SIM50-12
		(13)	OC (SPF) open/close detection position adjustment		SIM41-3
		(14)	Original sensor adjustment		SIM41-2, 41-4
		(15)	SPF white correction pixel position adjustment (required in an SPF model when replacing the lens unit)		SIM63-7
C	Image density (exposure) adjustment	(1)	Copy mode		SIM46-2

2. Copier adjustment

A. Process section

(1) Developing doctor gap adjustment

1) Loosen the developing doctor fixing screw A.
2) Insert a thickness gauge of 1.5mm to the three positions at 20mm and 150mm from the both ends of the developing doctor as shown.



3) Tighten the developing doctor fixing screw.
4) Check the clearance of the developing doctor. If it is within the specified range, then fix the doctor fixing screw with screw lock.

* When inserting a thickness gauge, be careful not to scratch the developing doctor and the MG roller.

<Adjustment specification>

Developing doctor gap

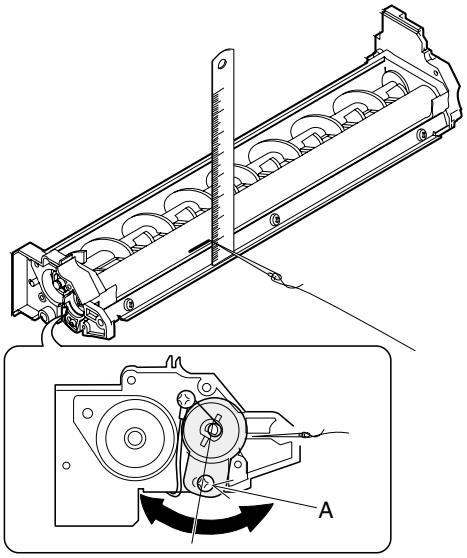
F/R both ends (20mm from the both ends): $1.5^{+0.1mm}_{-0.15mm}$

C (Center)(150mm from the both ends): $1.55^{+0.15mm}_{-0.2mm}$

(2) MG roller main pole position adjustment

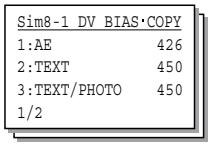
1) Put the developing unit on a flat surface.
2) Tie a needle or pin on a string.
3) Hold the string and bring the needle close to the MG roller horizontally. (Do not use paper clip, which is too heavy to make a correct adjustment.) (Put the developing unit horizontally for this adjustment.)
4) Do not bring the needle into contact with the MG roller, but bring it to a position 2 or 3mm apart from the MG roller. Mark the point on the MG roller which is on the extension line from the needle tip.
5) Measure the distance from the marking position to the top of the doctor plate of the developing unit to insure that it is 18mm.

   If the distance is not within the specified range, loosen the fixing screw A of the main pole adjustment plate, and move the adjustment plate in the arrow direction to adjust.



(3) Developing bias voltage adjustment (SIM 8-1)

1) Execute SIM 8-1.



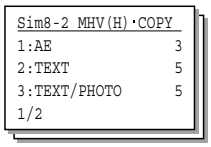
2) After selecting the mode, enter the adjustment value and press the [OK] key.
3) Output will be made for 30 sec.

<Adjustment specification>

Display items	Content	Installation range	Default
1:AE	AE	200-550	426 (–426V)
2:TEXT	Character		450 (–450V)
3:TEXT/PHOTO	Character/Photo		450 (–450V)
4:PHOTO	Photo		450 (–450V)
5:SUPER PHOTO	Super photo		400 (–400V)
6:TONER SAVE	Toner save		376 (–376V)

(4) Grid bias voltage adjustment (High mode) (SIM 8-2)

1) Execute SIM 8-2.



2) After selecting the mode, enter the adjustment value and press the [OK] key.
3) Output will be made for 30 sec.

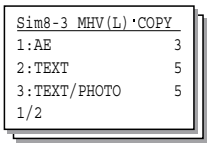
<Adjustment specification>

Display items	Content	Setting range	Default
1:AE	AE	1-8	4 (–555V)
2:TEXT	Character		5 (–580V)
3:TEXT/PHOTO	Character/Photo		5 (–580V)
4:PHOTO	Photo		5 (–580V)
5:SUPER PHOTO	Super photo		3 (–530V)
6:TONER SAVE	Toner save		2 (–505V)

∗ The input value is in the increment of –25V.

(5) Grid bias voltage adjustment (Low mode) (SIM 8-3)

1) Execute SIM 8-3.



2) After selecting the mode, enter the adjustment value and press the [OK] key.
3) Output will be made for 30 sec.

<Adjustment specification>

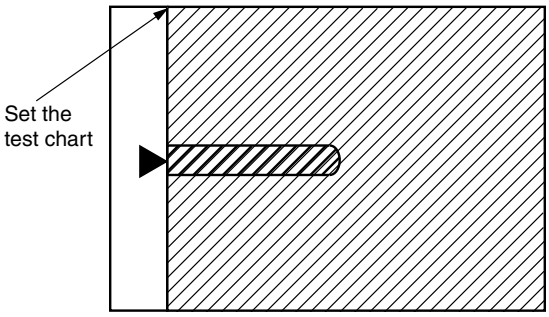
Display items	Content	Setting range	Default
1:AE	AE	1-8	4 (–426)
2:TEXT	Character		5 (–450)
3:TEXT/PHOTO	Character/Photo		5 (–450)
4:PHOTO	Photo		5 (–450)
5:SUPER PHOTO	Super photo		3 (–400)
6:TONER SAVE	Toner save		2 (–375)

∗ The input value is in the increment of –25V.

B. Mechanism section

(1) OC image lead edge position/Sub scanning magnification ratio/Original offset auto adjustment

1) Set the test chart (UKOG-0011QSZZ) on the OC table.
2) Execute SIM 48-3.



3) Make a copy.

(2) Print start position adjustment

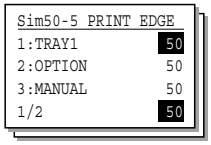
1) Execute SIM 50-5.

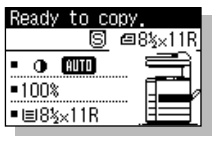
Select the mode with the arrow keys, enter the adjustment value with the 10-key, and press the [OK] key.

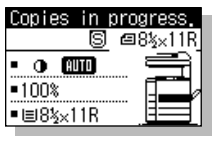
Pressing the [START] key makes a print.

Pressing the [RETURN] key returns to the mode selection.

(Initial screen) (Input screen) (Executing screen)





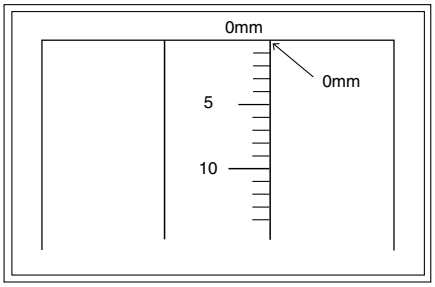


Display items	Content	Setting range	Default
1:TRAY1	1st cassette	0-99	53
2:OPTION	Option cassette	1-99	
3:MANUAL	Manual feed		
4:DUPLEX	Back print		

Setup of various copy conditions: Similar to the normal copy mode.

2) Measure the distance H between the paper lead edge and the image print start position. Set the image print start position set value again.
   - 1 step of the set value corresponds to about 0.127mm shift.
   - Calculate the set value from the formula below.

99 – H/0.127 (mm) = Image print start position set value <H: Print start position measurement value (mm)>



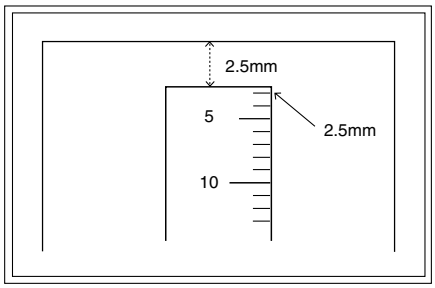
* Fit the print edge with the paper edge, and perform the lead edge adjustment.

Example:99 – 5/0.127 = 99 – 39.4 = about 59

Note: FIf the set value is not obtained from the above formula, perform the fine adjustment.

3) Execute SIM 50-1-2 to adjust the main cassette lead edge void.
   - 1 step of the set value corresponds to about 0.127mm shift.
   - Calculate the set value from the formula below.

   B/0.127 (mm) = Lead edge void adjustment value <B: Lead edge void (mm)>



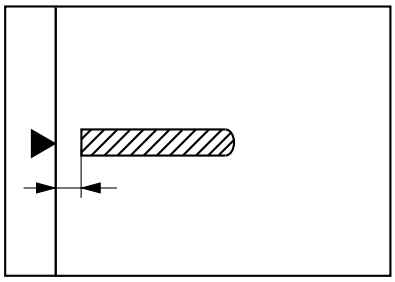
Example: When setting the lead edge void to 2.5mm:
2.5 /0.127 = about 20

<Adjustment specification>

Adjustment mode	SIM	Set value	Spec value	Setting range
Main cassette lead edge void	50-1-2	B/0.127	Lead edge void: 1 to 4mm	1 – 99
Print start position	50-5	99 – H/0.127	Image loss: 3mm or less	

(3) SPF image lead edge position adjustment

1) Set a scale on the OC table as shown below.



Note: Since the printed copy is used as a test chart, put the scale in paralleled with the edge lines.

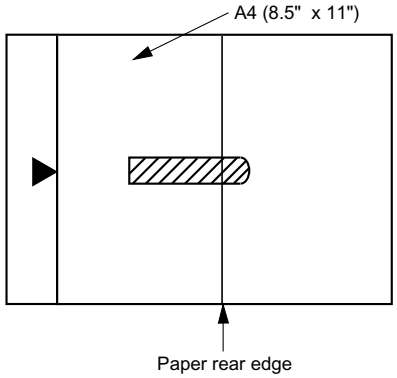
2) Make a copy, then use the copy output as an original to make an SPF copy again.
3) Check the copy output. If necessary, perform the following adjustment procedures.
4) Execute SIM 50-6.
5) Set the SPF lead edge position set value so that the same image is obtained as that obtained in the previous OC image lead edge position adjustment.

<Adjustment specification>

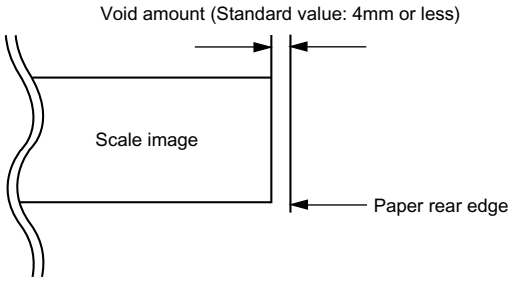
Adjustment mode	SIM	Set value	Spec value	Setting range
SPF image lead edge position	50-6	1 step: 0.127mm shift	Lead edge void: 1 – 4mm Image loss: 3mm or less	1 – 99

(4) Rear edge void adjustment

1) Set a scale as shown in the figure below.



2) Set the document size to A4 (8.5" x 11"), and make a copy at 100%.
3) If an adjustment is required, follow the procedures below.



4) Execute SIM 50-1 and set the density mode to DEN-B. The currently set adjustment value is displayed.
5) Enter the set value and press the start key.

   The correction value is stored and a copy is made.

<Adjustment specification>

Adjustment mode	SIM	Set value	Spec value	Setting range
Rear edge void	50-1-6	1 step: 0.127mm shift	4mm or less	1 – 99

(5) Paper off center adjustment

1) Perform this adjustment after execution of SIM 48-3.
2) Set a test chart (UKOG-0089SCZZ) on the document table.
3) Select a paper feed port and make a copy.

Compare the copy and the test chart. If necessary, perform the following adjustment procedure.

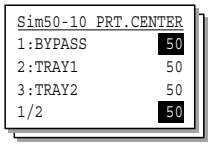
4) Execute SIM 50-10.

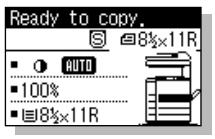
   Select the mode with the arrow keys, enter the adjustment value with the 10-key, and press the [OK] key.

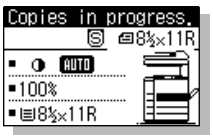
   Pressing the [START] key makes a print.

   Pressing the [RETURN] key returns to the mode selection.

(Initial screen) (Input screen) (Executing screen)







Display items	Content	Setting range	Default
1:BYPASS	Manual feed	1-99	50
2:TRAY1	1st cassette		
3:TRAY2	2nd cassette		
4:TRAY3	3rd cassette		
5:TRAY4	4th cassette		
6:DUPLEX	Back print		

Setup of various copy conditions: Similar to the normal copy mode.

<Adjustment specification>

Adjustment mode	SIM	Set value	Spec value	Setting range
Paper off center	50-10 -2	Add 1: 0.127mm shift to R side. Reduce 1: 0.127mm shift to L side.	Single: Center ±2.0mm	1 – 99
Second print surface off-center	50-10 -6		Duplex: Center ±2.5mm	

(6) Left edge void area adjustment

Note: Before performing this adjustment, be sure to check that the paper off center adjustment (SIM 50-10) is completed.

1) Set a test chart (UKOG-0089SCZZ) on the document table.
2) Select a paper feed port and make two copies.

   Compare the second copy and the test chart. If necessary, perform the following adjustment procedure.

* The first copy does not show the void. Be sure to check the second copy.

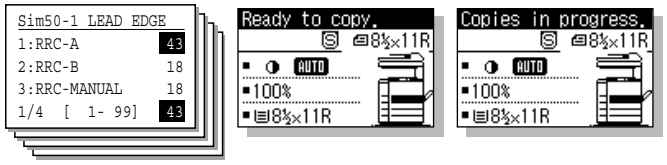
3) Execute SIM 50-1.

   Select the mode with the arrow keys, enter the adjustment value with the 10-key, and press the [OK] key.

   Pressing the [START] key makes a print.

   Pressing the [RETURN] key returns to the mode selection.

(Initial screen) (Input screen) (Executing screen)



Display items	Content	Setting range	Default
1:RRC-A	Original scan start position adjustment	1-99	43
2:RRC-B	RRC cancel adjustment (Main cassette)	1-99	18
3:RRC-MANUAL	RRC cancel adjustment (Manual feed cassette)	1-99	18
4:RRC-OPTION	RRC cancel adjustment (Option cassette)	1-99	18
5:RRC-DUPLEX	RRC cancel adjustment (back of the machine)	1-99	18
6:DEN-B	Rear edge void adjustment	1-99	30
7:DEN-B-DUP	Rear edge void adjustment (Duplex)	1-99	50
8:SIDE VOID	Left edge void adjustment (First print surface)	1-99	18
9:SIDE VOID-DUP	Left edge void adjustment (Duplex)	1-99	18
10:LOSS(OC)	Image loss quantity adjustment	1-5	3

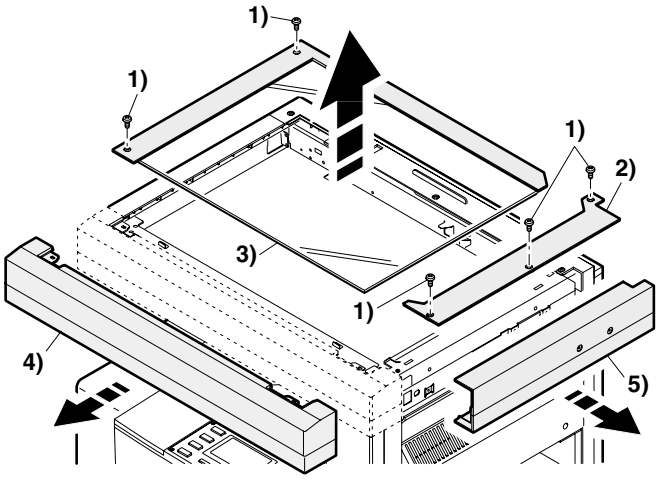
Setup of various copy conditions: Similar to the normal copy mode.

<Adjustment specification>

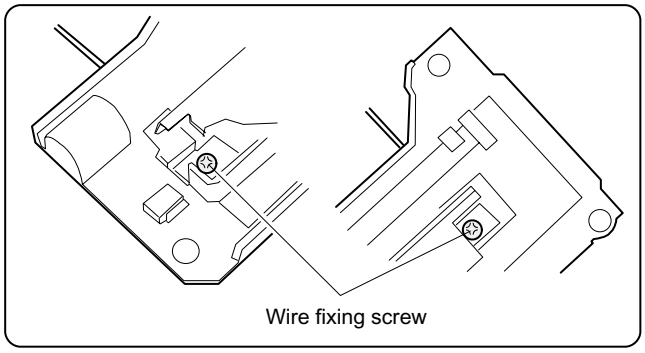
Adjustment mode	SIM	Set value	Spec value	Setting range
Left edge void	50-1-8	1 step: 0.127mm shift	0.5 – 4mm	1 – 99

(7) Main scanning direction (FR direction) distortion balance adjustment

1) Remove the OC glass and the right cabinet.



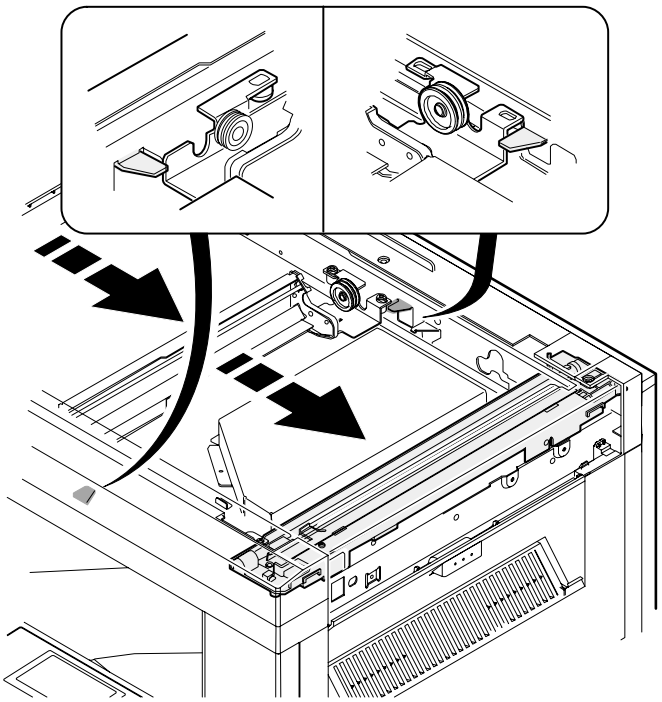
2) Loosen the copy lamp unit wire fixing screw.



3) Manually turn the mirror base drive pulley and bring No. 2/3 mirror base unit into contact with the positioning plate.

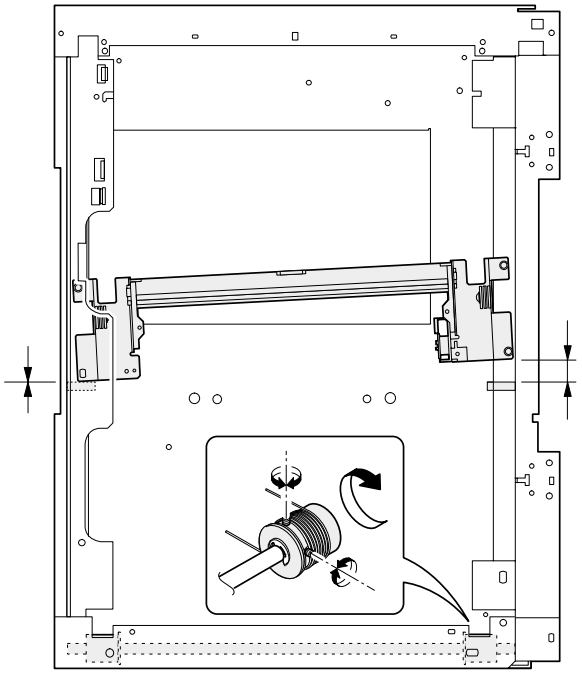
At that time, if the front frame side and the rear frame side of No. 2/3 mirror base unit are brought into contact with the positioning plate at the same time, the mirror base unit parallelism is proper.

If one of them is in contact with the positioning plate, perform the adjustment of 4).

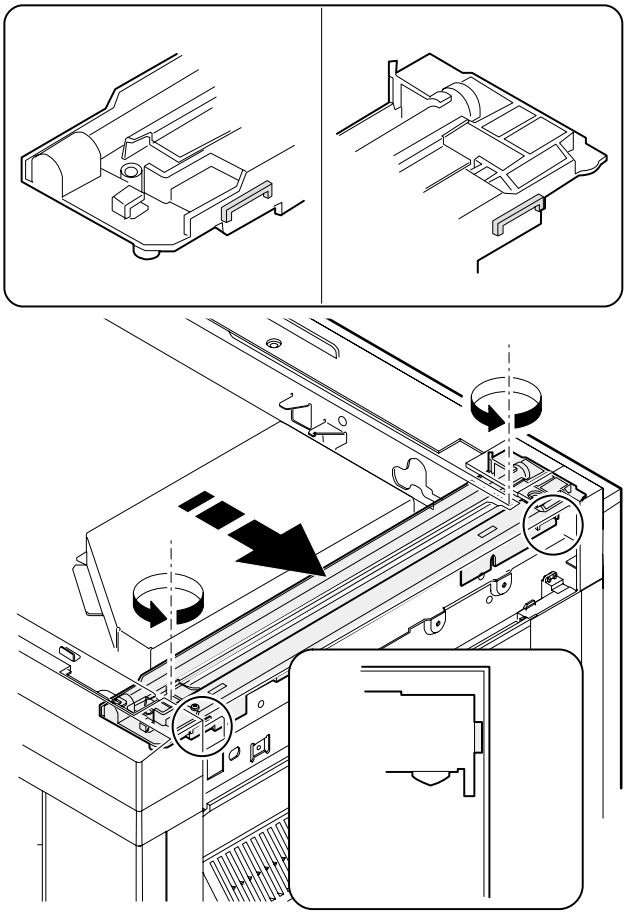


4) Loosen the set screw of the scanner drive pulley which is not in contact with No. 2/3 mirror base unit positioning plate.

5) Without moving the scanner drive pulley shaft, manually turn the scanner drive pulley until the positioning plate is brought into contact with No. 2/3 mirror base unit, then fix the scanner drive pulley.



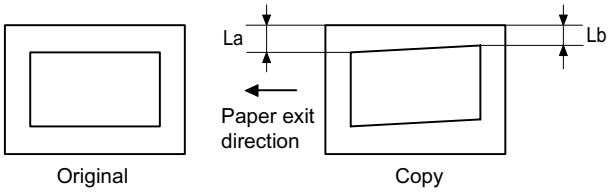
6) Put No. 2/3 mirror base unit on the positioning plate again, push the projections on the front frame side and the rear frame side of the copy lamp unit to the corner frame, and tighten the wire fixing screw.



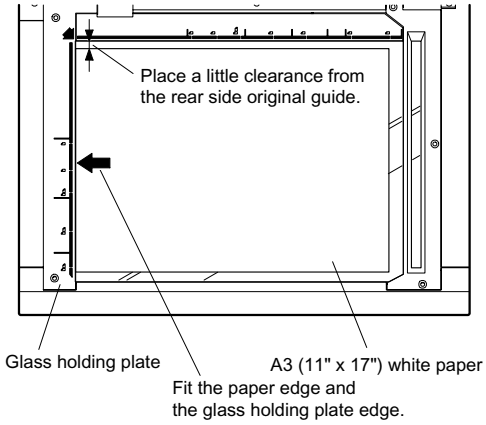
(8) Sub scanning direction (scanning direction) distortion adjustment (Winding pulley position adjustment)

This adjustment must be performed in the following cases:

- When the mirror base drive wire is replaced.
- When the lamp unit, or No. 2/3 mirror holder is replaced.
- When a copy as shown is made.

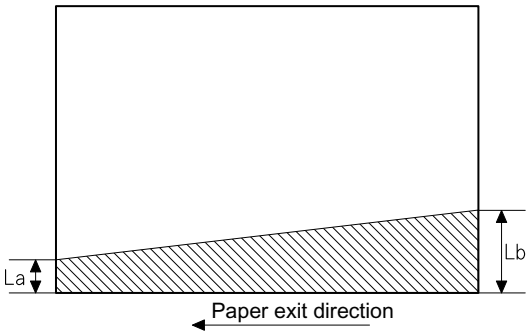


1) Set A3 (11" x 17") white paper on the original table as shown below.


Place a little clearance from the rear side original guide.
Glass holding plate
A3 (11" x 17") white paper
Fit the paper edge and the glass holding plate edge.

2) Open the original cover and make a normal (100%) copy.

3) Measure the width of the black background at the lead edge and at the rear edge.

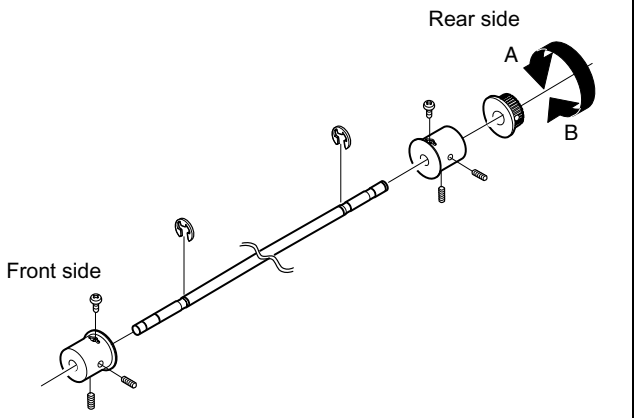


La: Lead edge black background width
Lb: Rear edge black background width

If the width (La) of the black background at the lead edge is equal that (Lb) at the rear edge, there is no need to execute the following procedures of 4) – 7).

4) Loosen the mirror base drive pulley fixing screw on the front frame side or on the rear frame side.

- When La < Lb
  Turn the mirror base drive pulley on the front frame side in the arrow direction A. (Do not move the mirror base drive pulley shaft.)
- When La > Lb
  Turn the mirror base drive pulley on the rear frame side in the arrow direction A. (Do not move the mirror base drive pulley shaft.)



5) Tighten the fixing screw of the mirror base drive pulley.

<Adjustment specification>

La = Lb

6) Execute the main scanning direction (FR) distortion balance adjustment previously described in 2) again.

(9) Main scanning direction (FR direction) distortion balance adjustment (Rail height adjustment)

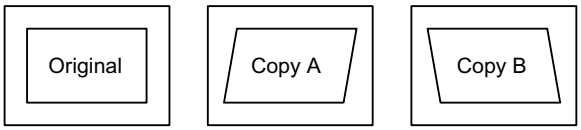
When there is no skew copy in the mirror base scanning direction and there is no horizontal error (right angle to the scanning direction), the adjustment can be made by adjusting the No. 2/3 mirror base unit rail height.

Before performing this adjustment, be sure to perform the horizontal image distortion adjustment in the laser scanner section.

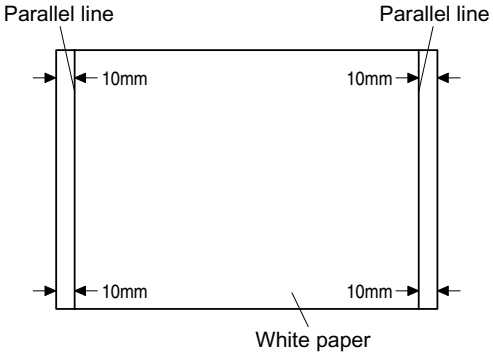
This adjustment must be performed in the following cases:

- When the mirror base wire is replaced.
- When the copy lamp unit and no. 2/3 mirror unit are replaced.
- When the mirror unit rail is replaced and moved.

- When a following copy is made.

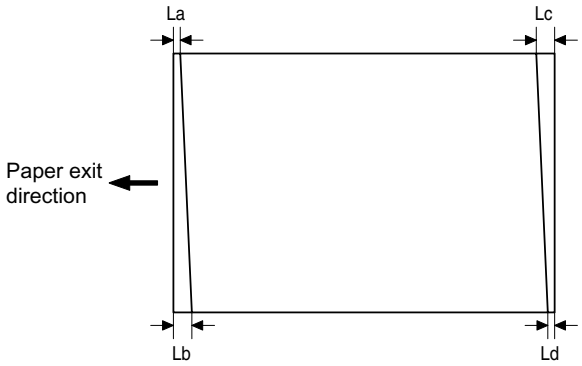


1) Make an original for the adjustment.
   Make test sheet by drawing parallel lines at 10mm from the both ends of A3 (11" x 17") white paper as shown below. (These lines must be correctly parallel to each other.)



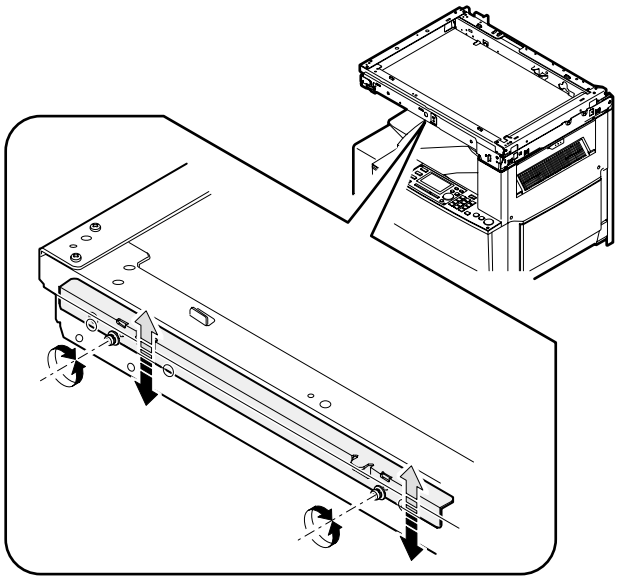
2) Make a normal (100%) copy of the test sheet on A3 (11" x 17") paper. (Fit the paper edge and the glass holding plate edge.)

3) Measure the distances (La, Lb, Lc, Ld) at the four corners as shown below.



When La = Lb and Lc = Ld, no need to perform the procedures 4) and 5).

4) Move the mirror base B rail position up and down (in the arrow direction) to adjust.



- When La > Lb
  Shift the mirror base B rail upward by the half of the difference of La–Lb.
- When La < Lb
  Shift the mirror base B rail downward by the half of the difference of Lb–La.
  Example: When La = 12mm and Lb = 9mm, shift the mirror base B rail upward by 1.5mm.
- When Lc >Ld
  Shift the mirror base B rail downward by the half of the difference of Lc–Ld.
- When Lc < Ld
  When Lc < Ld, move the mirror base B on the paper feed side upward.

* When moving the mirror base rail, hold the mirror base rail with your hand.

<Adjustment specification>

La = Lb, Lc = Ld

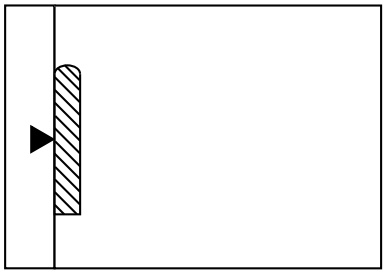
5) After completion of adjustment, manually turn the mirror base drive pulley, scan the mirror base A and mirror base B fully, and check that the mirror bases are not in contact with each other.

* If the mirror base rail is moved extremely, the mirror base may be in contact with the frame or the original glass. Be careful to avoid this.

(10) Main scanning direction (FR direction) magnification ratio adjustment (SIM 48-1)

Note: Before performing this adjustment, be sure to check that the CCD unit is properly installed.

1) Put a scale on the original table as shown below.



2) Execute SIM 48-1.
3) After warm-up, shading is performed and the current set value of the main scanning direction magnification ratio is displayed on the display section in 2 digits.
4) Select the mode and press the start key again.
5) Auto correction mode (SIM48-1-1)
   The mirror unit moves to the shading position, and the reference width of the reference white plate is scanned, and the correction value is automatically calculated from that scanned value.
   The correction value is displayed and a copy is made.
6) Compare the scale image and the actual scale.
   If a fine adjustment is required, switch to the manual correction mode with the magnification ratio display key and perform fine adjustment.
7) Manual correction mode (SIM48-1-2)
   Enter the set value and press the start key.
   The correction value is stored and a copy is made.

<Adjustment specification>

Note: A judgement must be made with 200mm width, and must not be made with 100mm width.

Adjustment mode	Spec value	SIM	Set value	Setting range
Main scanning direction magnification ratio	At normal: ±1.0%	48-1	Add 1: 0.1% increase Reduce 1: 0.1% decrease	1 – 99

• Error in the auto correction mode

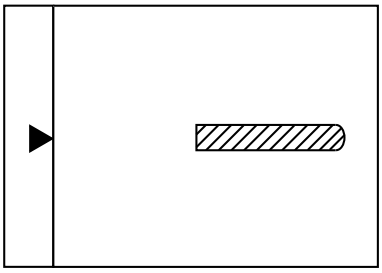
Display	Content	Major cause
Copy quantity display "– –"	The correction value calculated is over 5%.	• Improper position of reference width line of the reference white plate • Improper installation of CCD unit
Paper jam lamp ON	Reference line scanning error	• Defective CCD • No reference white plate

(11) Sub scanning direction (scanning direction) magnification ratio adjustment (SIM 48-1-3)

a. OC mode in copying

Note: Execute the procedure after completion of SIM 48-1-3.

1) Put a scale on the original table as shown below, and make a normal (100%) copy.



2) Compare the scale image and the actual scale.
   If necessary, perform the following adjustment procedures.
3) Execute SIM 48-1-3.
4) Enter the set value and press the start key.
   The set value is stored and a copy is made.

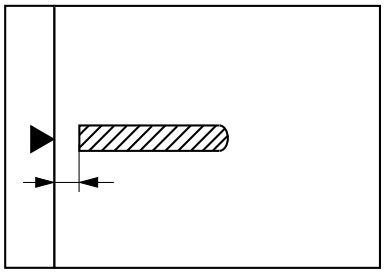
<Adjustment specification>

Adjustment mode	Spec value	SIM	Set value	Setting range
Sub scanning direction magnification ratio (OC mode)	At normal: ±1.0%	48-1-3	Add 1: 0.05% increase Reduce 1: 0.05% decrease	1 – 99

b. RSPF sub scanning direction magnification ratio

Note: Before performing this adjustment, be sure to check that the CCD unit is properly installed and that OC mode adjustment in copying has been completed.

1) Put a scale on the original table as shown below, and make a normal (100%) copy to make a test chart.



Note: Since the printed copy is used as a test chart, put the scale in paralled with the edge lines.

2) Set the test chart on the SPF and make a normal (100%) copy.
3) Compare the scale image and the actual image.
   If necessary, perform the following adjustment procedures.
4) Execute SIM 48-1-4.
5) After warm-up, shading is performed.
   The current front surface sub scanning direction magnification ratio correction value is displayed in two digits on the display section.

6) Enter the set value and press the start key.
The set value is stored and a copy is made.

7) Execute SIM 48-1-5.
The current back surface sub scanning direction magnification ratio is displayed in two digits on the display section.

8) Enter the set value and press the start key.
The set value is stored and a copy is made.

<Adjustment specification>

Adjustment mode	Spec value	SIM	Set value	Setting range
Sub scanning direction magnification ratio (SPF mode)	At normal: ±1.0%	48-1-4 48-1-5	Add 1: 0.05% increase Reduce 1: 0.05% decrease	1 – 99

(12) Off center adjustment (SPF mode)

Note: Before performing this adjustment, be sure to check that the paper off center is properly adjusted.

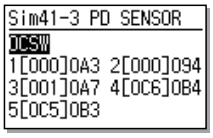
1) Place the center position adjustment test chart (sheet with a straight line in the scan direction at the center) on the SPF.
2) Make a normal copy from the manual paper feed tray, and check the printed copy with the test chart.
If any adjustment is required, perform the following procedure.
3) Execute SIM 50-12.
4) After warm-up, shading is performed and the current set value of the off center adjustment is displayed on the display section in 2 digits.
5) Enter the set value and press the start key.
The set value is stored and a copy is made.

<Adjustment specification>

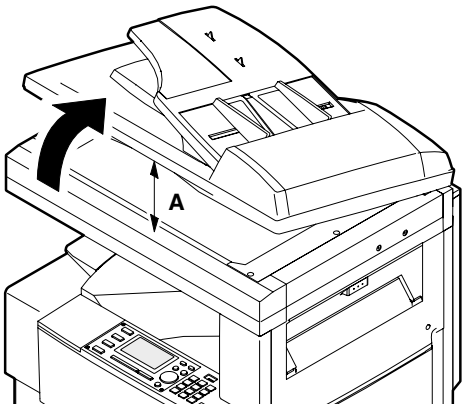
Adjustment mode	Spec value	SIM	Set value	Setting range
Original off center mode (SPF mode)	Single: Center ± 3.0mm	50-12	Add 1: 0.1mm shift to R side	1 – 99
	Duplex: Center ±3.5mm		Reduce 1: 0.1mm shift to L side	

(13) OC (SPF) open/close detection position adjustment

1) Execute SIM 41-3.
2) Gradually close the OC (SPF) from the full open position, and measure distance A when the display on the operation panel changes. (See the figure below.)



Distance A = Table glass top - OC (SPF) handle rib

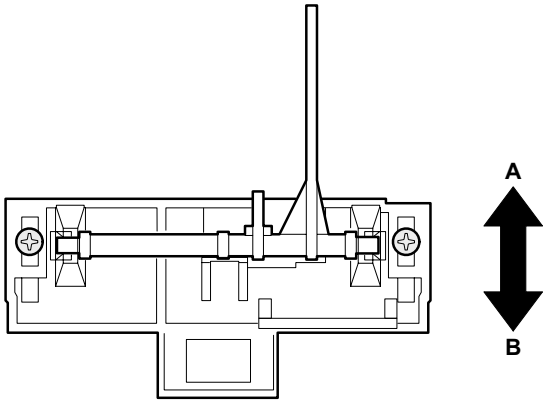


<Adjustment specification>

OC (SPF) open/close position A: 125 – 225mm

3) If the distance is outside the specified range, adjust the open/close sensor attachment plate position as shown below.

- Distance < 125mm: Shift toward A.
- Distance > 225mm: Shift toward B.



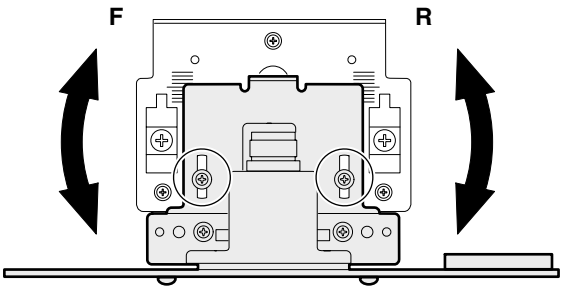
(14) Original sensor adjustment (SIM 41-2, 41-4)

1) Set A3 (11" x 17") paper on the OC table.
(Keep the SPF (OC cover) open.)
2) Execute SIM 41-2.
3) Keep A=125mm, and execute SIM 41-4. (Do not put paper on the table.)
4) Check the reaction with SIM 41-1.

(15) SPF white correction pixel position adjustment (required in an SPF model when replacing the lens unit) (SIM63-7)

1) Fully open the SPF.
2) Execute SIM 63-7.
3) When the operation panel displays "COMPLETE," the adjustment is completed.
4) If the operation panel displays "ERROR," perform the following measures.

- When the display is 0:
Check that the SPF is open.
Check that the lamp is ON. (If the lamp is OFF, check the MCU connector.)
Check that the CCD harness is properly inserted into the MCU connector.
- When the display is 281 or above:
  1) Remove the table glass.
  2) Remove the dark box.
  3) Slide the lens unit toward the front side and attach it, then execute SIM.
- When the display is 143 or below:
  1) Remove the table glass.
  2) Remove the dark box.
  3) Slide the lens unit toward the rear side and attach it, then execute SIM.

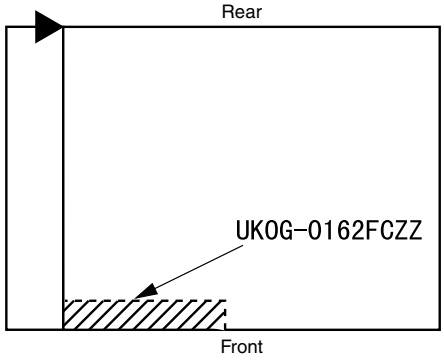


* When the lens unit is moved, execute the OC main scanning magnification ratio auto adjustment, SIM 48-1-1, SIM48-3 and the SPF original off-center adjustment.
* This adjustment is basically O.K. with SIM 63-7.

C. Image density (exposure) adjustment

(1) Copy mode (SIM46-2)

1) Set a test chart (UKOG-0162FCZZ) on the OC table as shown below.



2) Place three or more sheets of A3 (11" x 17") paper on the test chart.
3) Execute SIM 46-2.
4) After warm-up, shading is performed and the current set value of the density (exposure) level is displayed on the display section in 2 digits.

   For mode selection, use the [10-key].
5) Change the set value with the [10-key] to adjust the copy image density.
6) Make a copy and check that the specification below is satisfied.

Note: Place originals in the rear reference, and the test chart in the front reference when adjusting the exposure.

<Adjustment specification>

Density mode	Display Lamp	Exposure level	Sharp Gray Chart output	Set value	Setting range
AUTO	AUTO	–	"3" is copied.	If too bright, increase the quantity displayed on the copy quantity display. If too dark, decrease the quantity displayed on the copy quantity display.	0 – 99
TEXT	TEXT	3	"3" is copied.		
TEXT/ PHOTO	TEXT/ PHOTO	3	"3" is copied.		
PHOTO	PHOTO	3	"3" is copied.		
SUPER PHOTO	SUPER PHOTO	3	"3" is copied.		
TONER SAVE	AUTO (TS)	3	"3" is copied.		
	TEXT (TS)	3	"3" is copied.		
	TEXT PHOTO (TS)	3	"3" is copied.		

[8] SIMULATION

1. Operating procedures and operations

A. Basic operation

	Procedure	Key operation
1	Simulation mode selection	[#] → [INTERRUPT] → [C] → [INTERRUPT]
2	Main code selection	[10-key] (Input main code) → [START]
3	Sub code selection	[10-key] (Input sub code) → [START]
4	Selection of the mode and item	[10-key] and [↑] [↓]
5	Start simulation operation	[OK] or [START]
6	Returns to the sub code selection.	[INTERRUPT]
	Simulation mode clear	[CA]

- Selection of the main code and the sub code is set with the [START] key.
- There are two or more screens, the adjustment "Current page/Max. page" is displayed. Press [↑] key (previous page) or [↓] key to select a screen.

B. Simulation kinds and valid key functions

Data screen system

Screen	Key	Function
Counter display	CA	Cancel simulation
	Interrupt	Sub code input screen appears.
	↓, ↑	Page switch (in the case of multiple pages)

Sensor check system

Screen	Key	Function
Sensor check screen	CA	Cancel simulation
	Interrupt	Sub code input screen appears.
	↓, ↑	Page switch (in the case of multiple pages)

Data setting system

Screen	Key	Function
Selection of the adjustment items	CA	Cancel simulation
	Interrupt	Sub code input screen appears.
	C	Input value clear
	10-key	Adjustment item selection
	↓, ↑	Page switch (in the case of multiple pages)
	OK	The adjustment value input screen appears.
Adjustment value input	CA	Cancel simulation
	Interrupt	The sub code input screen appears.
	10-key	Adjustment value input
	C	Input value clear
	OK	Input final value
	Back	The adjustment item select screen appears.

Load operation system

Screen	Key	Function
Load selection	CA	Cancel simulation
	Interrupt	Sub code input screen appears.
	C	Input value clear
	10-key	Load number selection
	↓, ↑	Page switch (in the case of multiple pages)
	OK	Shifts to the screen during operation.
Execution	CA	Cancel simulation
	Interrupt	Sub code input screen appears.
	Back	The load selection screen appears.

Load operation system with magnification ratio setup

Screen	Key	Function
Selection of the number of times	CA	Simulation cancel
	Interrupt	Sub code input screen appears.
	C	Input value clear
	10-key	Entry of the number of times
	OK	Shifts to the magnification ration selection screen.
Maginification ratio selection	CA	Cancel simulation
	Interrupt	Sub code input screen appears.
	←, →	Magnification ratio selection (1% increment)
	↓, ↑	Fixed magnification ratio setting
	OK	Shifts to the screen during operation.
	Back	Shifts to the number of times selection screen.
Execution	CA	Cancel simulation
	Interrupt	Sub code input screen appears.
	Back	Shifts to the magnification ratio setup menu.

Load operation system with data setup

Screen	Key	Function
Selection of the adjustment items	CA	Cancel simulation
	Interrupt	Sub code input screen appears.
	C	Input value clear
	10-key	Adjustment item selection
	↓, ↑	Page switch (in the case of multiple pages)
	OK	The adjustment value input screen appears.
Adjustment value input	CA	Cancel simulation
	Interrupt	Sub code input screen appears.
	10-key	Adjustment value input
	C	Input value clear
	OK	Set value check
	Back	The adjustment item selection screen appears.
Execution	CA	Cancel simulation
	Interrupt	Sub code input screen appears.
	Back	The adjustment value input screen appears.

Single print system

Screen	Key	Function
Selection of the adjustment items	CA	Cancel simulation
	Interrupt	Sub code input screen appears.
	C	Input value clear
	10-key	Adjustment value input
	↓, ↑	Page switch (in the case of multiple pages)
	←, →	Item switch
	OK	The adjustment value input screen appears.
	START	Input value assured. → Print one page. → Shifts to the execution screen.
Adjustment value input	CA	Cancel simulation
	C	Input value clear
	Back	The adjustment item selection screen appears.
	10-key	Adjustment value input
	START	Determination of the input value → Print of one page → shift to the execution screen.
Execution	CA	After the single print, the copy conditions are cleared and the adjustment value input screen appears.
	C	After the single print, the copy conditions are not cleared and the adjustment value input screen appears.

Load operation system with data display

Screen	Key	Function
Initial stage	CA	Cancel simulation
	Interrupt	Sub code input screen appears.
	C	Input value clear
	10-key	Speed number selection
	OK	Shifts to the screen during operation.
Execution	CA	Cancel simulation
	Interrupt	Sub code input screen appears.
	Back	The intial screen appears.

Memory clear system

Screen	Key	Function
Counter selection	CA	Cancel simulation
	Interrupt	Sub code input screen appears.
	C	Input value clear
	10-key	Load number selection
	OK	The check screen appears.
Check	CA	Cancel simulation
	Interrupt	Sub code input screen appears.
	OK	Clears and shifts to the counter select menu.
	Back	Not clears and shifts to the counter select menu.

Display check system

Screen	Key	Function
Display check	CA	Cancel simulation
	Interrupt	Sub code input screen appears.

C. Simulation operation and procedure basic pattern

The pattern numbers in the table below are specified to the detailed procedures described below (for each simulation). Refer to them as necessary.

No.	Simulation operation and procedure pattern	Screen type	Operations and procedures common to every pattern
1	Used to set the adjustment only.	Adjustment value input menu	Enter the adjustment value with the 10-key and press the [OK] key. If the input value is within the set range, it is stored. If it is outside the set range, it is not set.
2	Used to select the mode and set the adjustment value.	Mode selection menu	Select the mode with the 10-key and press the [OK] key, and the menu shifts to the adjustment value input menu.
		Adjustment value input menu	Enter the adjustment value with the 10-key and press the [OK] key. If the input value is within the set range, it is stored. If it is outside the set range, it is not set. Pressing the [BACK] key returns to the mode selection menu.
3	Used to set the adjustment value and output.	Adjustment value input menu	Enter the adjustment value with the 10-key and press the [OK] key, and the menu goes to the execution display. If the input value is within the set range, it is stored. If it is outside the set range, it is not set.
		Execution menu	During execution, [EXEC] is highlighted. Pressing the [BACK] key interrupts the operation and returns to the adjustment value input menu.
4	Used to select the mode and set the adjustment value and make an output.	Mode selection menu	Select the mode with the 10-key and press the [OK] key, and the menu shifts to the adjustment value input menu.
		Adjustment value input menu	Enter the adjustment value with the 10-key and press the [OK] key, and the menu goes to the execution display. If the input value is within the set range, it is stored. If it is outside the set range, it is not set. Pressing the [BACK] key returns to the mode selection menu.
		Execution menu	During execution, [EXEC] is highlighted. Pressing the [BACK] key interrupts the operation and returns to the adjustment value input menu.
5	1 sheet print mode	Mode selection menu	Enter the adjustment value with the 10-key and press [←] key to shift to the next mode, and press [→] key to shift to the previous mode. Press the [START] key to make 1 sheet print. Pressing the [OK] key shifts to the adjustment value input menu. If the input value is within the set range, it is stored. If it is outside the set range, it is not set.
		Adjustment value input menu	Press the adjustment value with the 10-key and press the [START] key to make 1 sheet print. After completion of print, the mode selection screen appears.
6	Used to clear.	Initial menu	Pressing the [OK] key shifts to the confirmation display.
		Confirmation menu	The confirmation message is displayed. Press the [OK] key to clear. Pressing the [BACK] key returns to the initial menu without cleaning.
7	Used to select the item to clear and execute clearing.	Selection menu	Select the counter to clear with the 10-key and press the [OK] key, and the menu goes to the confirmation display.
		Confirmation menu	The confirmation message is displayed. Press the [OK] key to clear. Pressing the [BACK] key returns to the selection menu without cleaning.
8	Used to operate loads.	Initial menu	Pressing the [OK] key shifts to the execution display.
		Execution menu	During execution of load operation, [EXEC] is highlighted. Pressing the [BACK] key interrupts the operation and returns to the initial menu.
9	Used to select the load to operate and operate the load.	Selection menu	The names of the loads which can be operated are displayed. Select one with the 10-key and press the [OK] key, and the menu will go to the execution menu.
		Execution menu	During execution of load operation, [EXEC] is highlighted. Pressing the [BACK] key interrupts the operation and returns to the mode selection menu.
10	Used to set the number of times, the magnification ratio, and the original size, and check the operations. (Scanner unit)	Input menu of the number of times	Select the mode with the 10-key and press the [OK] key, and the menu shifts to the magnification ratio and original size setup menu.
		Magnification ratio and original size setup menu	Select the magnification ratio with [↑][↓] keys. (Fixed magnification ratio) Set the magnification ratio to a desired level with [←][→] keys. (1% increment) Select the original size with the [PAPER SIZE] key. Pressing the [OK] key shifts to the execution display. Pressing the [BACK] key returns to the input menu of the number of times.
		Execution menu	The scanner unit is moved at the speed corresponding to the set magnification ratio and the original size. During execution, [EXEC] is highlighted. Pressing the [BACK] key interrupts the operation and returns to the setup menu of the magnification ratio and the original size.

No.	Simulation operation and procedure pattern	Screen type	Operations and procedures common to every pattern
11	Used to set the number of times, the magnification ratio, and the original size, and check the operations. (SPF unit)	Input menu of the number of times	Select the mode with the 10-key and press the [OK] key, and the menu shifts to the magnification ratio and original size setup menu.
		Magnification ratio and original size setup menu	Select the magnification ratio with [↑][↓] keys. (Fixed magnification ratio) Set the magnification ratio to a desired level with [←][→] keys. (1% increment) Select the original size with the [PAPER SIZE] key. Select Single/Duplex with the [DUPLEX] key. Pressing the [OK] key shifts to the execution display. Pressing the [BACK] key returns to the input menu of the number of times.
		Execution menu	The SPF unit is moved at the speed corresponding to the set magnification ratio and the original size. During execution, [EXEC] is highlighted. Pressing the [BACK] key interrupts the operation and returns to the setup menu of the magnification ratio and the original size.
12	Used to select the mode and check the operations. (Shifter)	Mode selection menu	Select the mode with the 10-key and press the [OK] key. When 1 is selected, the menu shifts to the execution menu. When 2 is selected, the menu shifts to the input menu.
		Execution menu	During execution, [EXEC] is highlighted. Pressing the [BACK] key interrupts the operation and returns to the mode selection menu.
		Input menu	Pressing [←] key shifts the position toward R side by the specified steps. Pressing [→] key shifts the position toward F side by the specified steps. Pressing [↑] key shifts the home position. Pressing the [BACK] key returns to the mode selection menu.

2. Simulation code list

Code		Function
Main	Sub	
1	1	Used to check the operation of the scanner unit and its control circuit.
	2	Used to check the operation of sensor and detector in the scanning (read) section and the related circuit.
2	1	Used to check the operation of the SPF unit and the related circuit.
	2	Used to check the operation of sensors and detectors in the SPF unit and the related circuit.
	3	Used to check the operation of the loads in the SPF unit and the control circuits.
3	2	Used to check the operation of sensor and detector in the finisher and the related circuit.
	3	Used to check the operation of the load in the finisher and the control circuit.
	6	Used to adjust the finisher jogger position.
	7	Used to adjust the offset tray operations.
	11	Used to check the operation of the shifter.
4	2	Used to check the operation of sensor and detector in the option tray and the related circuit.
	3	Used to check the operation of the load in the option tray and the control circuit.
5	1	Used to check the operation of the display, LCD in the operation panel, and control circuit.
	2	Used to check the operation of the heater lamp and the control circuit.
	3	Used to check the operation of the copy lamp and the control circuit.
6	1	Used to check the oepration of the loads (clutches and solenoids) in the paper transport system and the control circuit.
	2	Used to check the operation of each fan motor and its control circuit.
7	1	Used to set the aging operation conditions.
	6	Used to set the cycle of intermittent aging.
	8	Used to set the display of the warm-up time.
8	1	Used to check and adjust the operation of the developing bias voltage in each copy mode and the control circuit.
	2	Used to check and adjust the operation of the main charger grid voltage (high mode) in each copy mode and the control circuit.
	3	Used to check and adjust the operation of the main charger grid voltage (low mode) in each copy mode and the control circuit.
	10	Used to check and adjust the operation of the developing bias voltage in each printer mode and the control circuit.
	11	Used to check and adjust the operation of the main charger grid voltage (high mode) in each printer mode and the control circuit.
	12	Used to check and adjust the operation of the main charger grid voltage (low mode) in each printer mode and the control circuit.
	13	Used to check and adjust the operation of the developing bias voltage in FAX mode and the control circuit.
	14	Used to check and adjust the operation of the main charger grid voltage (high mode) in FAX mode and the control circuit.
	15	Used to check and adjust the operation of the main charger grid voltage (low mode) in FAX mode and the control circuit.
9	1	Used to check and adjust the operation of the load (motor) in the duplex section and the control circuit.
	4	Used to adjust the rotation speed of the duplex motor.
	5	Used to adjust the switch back time of the duplex motor.
10	0	Used to check the operation of the toner motor and its control circuit.
14	0	Used to cancel excluding the self-diag U2/PF troubles.
16	0	Used to cancel the self-diag U2 trouble.
17	0	Used to cancel the self diag "PF" trouble.
21	1	Used to set the maintenance cycle.

Code		Function
Main	Sub	
22	1	Used to check the counter value of each section.
	2	Used to check the total numbers of misfeed and troubles. (When the number of misfeed is considerably great, it is judged as necessary for repair. The misfeed rate is obtained by dividing this count value with the total counter value.)
	3	Used to check the misfeed positions and the number of misfeed at each position. (When the number of misfeed is considerably great, it can be judged as necessary for repair.)
	4	Used to check the total trouble (self diag) history.
	5	Used to check the ROM version of each unit (section).
	7	Used to display the key operator code
	8	Used to check the number of use of the staple, the SPF, and scanning.
	9	Used to check the number of use of each paper feed section. (the number of prints)
	10	Used to check the system configulation.
	11	FAX related counter display
	12	Used to check the misfeed positions and the number of misfeed at each position. (When the number of misfeed is considerably great, it can be judged as necessary for repair.)
	19	Used to display the scanner mode counter.
24	1	Used to clear the misfeed counter, the misfeed history, the trouble counter, and the trouble history. (The counters are cleared after completion of maintenance.)
	2	Used to clear the number of use (the number of prints) of each paper feed section.
	3	Used to clear the number data of use of the staple, the SPF and scanning.
	4	Used to reset the maintenance counter.
	5	Used to reset the developer counter. (The developer counter of the DV unit which is installed is reset.)
	6	Used to reset the copy counter.
	7	Used to clear the OPC drum (membrane decrease) correction counter. (This simulation is executed when the OPC drum is replaced.
	9	Used to clear the printer print counter. (The counter is cleared after completion of maintenance.)
	10	FAX related counter clear
	15	Used to clear the scanner mode counter.
25	1	Used to check the operation of the main drive (excluding the scanner section) amd to check the operation of the toner concentration sensor. (The toner concentration sensor output can be monitored.)
	2	Used to make the initial setting of toner concentration when replacing developer.
26	1	Used to set options. (This simulation is used to make option setting when an option is installed.)
	2	Used to detect the paper size.
	3	Used to set the specifications of the auditor. Setting must be made depending on the use condition of the auditor.
	5	Used to set the count mode of the total counter and the maintenance counter.
	6	Used to set the specifications depending on the destination.
	10	Used to enter the Software Key for the Network Scanner. (Setup is allowed only when the PCL board is installed.
	12	Used to input the Software Key for E-MAIL RIC.

Code		Function
Main	Sub	
26	14	Used to input the Software Key for the PS extention kit.
	18	Used to set enable/disable of toner save operation.
	20	Used to set the job separator paper exit mode.
	22	Used to set the specification (language display) for the destination.
	30	Used to set the operation mode for CE mark.
	35	Used to set the mode of trouble memory.
	36	Used to set whether to stop when the maintenance life is reached.
	37	Used to set whether to stop when the developer life is reached.
	38	Used to set whether to stop when the drum life is reached.
	46	Used to set whether to meet with the output direction of images regardless of the mode when installing the finisher.
	50	Used to set whether to use the black/white reverse function.
	54	Used to set the PWM duty (brightness) at the center value of the LCD contrast.
	57	Used to set the model code.
	60	Used to set enable/disable of the FAX mode key when FAX is not installed. (When FAX is installed, the FAX mode is enabled regardless of this setup.)
27	1	Used to set PC/MODEM communication trouble (U7-00) detection Yes/No.
	5	Used to enter the TAG No. of the copier.
30	1	Used to check the operation of sensors and detectors in the sections other than the paper feed section of the copier and the related circuit. (The operation of sensors and detectors can be monitored with the LCD.)
	2	Used to check the operation of sensors and detectors in the paper feed section and the related circuits. (The operations of sensors and detectors in the paper feed section can be monitored with the LCD.)
40	1	Used to check the operation of the manual paper feed tray paper size detector and the related circuit. (The operation of the manual paper feed tray paper size detector can be monitored with the LCD.)
	2	Used to adjust the manual paper feed tray paper width detector detection level.
	3	The AD conversion value of manual feed width detection is displayed.
41	1	Used to check the document size detection photo sensor.
	2	Used to adjust the detection level of the document size photo sensor.
	3	Used to check the light reception level and the detection level of the original size detection photo sensor.
	4	Used to adjust the detection level of OC 20 degrees.
43	1	Used to set the fusing temperature in each operation mode.
	10	Used to set the paper feed cycle for postcard.
44	1	Used to make various setups in each mode of process control.
	34	Used to adjust the transfer current value.
	35	Correction temperature setup when correcting the ambient temperature.
	40	Used to set the rotating time before toner supply.

Code		Function
Main	Sub	
46	2	Used to adjust the copy exposure level.
	7	Used to adjust individually the copy exposure level. (Super photo)
	9	Used to adjust individually the copy exposure level. (Character)
	10	Used to adjust individually the copy exposure level. (Character/Photo)
	11	Used to adjust individually the copy exposure level. (Photo)
	12	FAX exposure level adjustment (batch)
	13 to 16	FAX exposure level adjustment (individual)
	18	Used to adjust the copy contrast. (Inclination)
	19	Used to change the image quality in the exposure mode.
	20	Used to correct SPF exprosure.
	30	Used to set the AE limit.
48	1	Used to adjust the copy magnification ratio (main scanning direction, sub scanning direction).
	2	Used to adjust the scanner magnification ratio (main/sub scanning direction).
	3	Used to adjust the lead edge/sub scan magnification ratio.
	8	FAX magnification ratio adjustment (read)
	9	FAX magnification ratio adjustment (print)
	10	FAX auto reduction magnification ratio (print).
50	1	Used to adjust the copy lead edge position.
	5	Used to adjust the print image position (top margin) on the print paper in the print mode.
	6	Used to adjust the print image position (top margin) on print paper in the copy mode. (SPF/RSPF)
	8	FAX lead edge adjustment (read)
	9	FAX lead edge adjustment (print)
	10	Used to adjust the print image center position. (Adjustment can be made for each paper feed section.)
	12	Used to adjust the print image center position. (Adjustment can be made for each document mode.)
51	1	Used to adjust the OPC drum separation pawl ON time.
	2	Used to adjust the contact pressure of paper onto the resist roller in each section (copier paper feed section, duplex paper feed section, SPF paper feed section). (When the print image position varies greatly for the paper or when a lot of paper jam troubles occur, the adjustment is required.)
	8	Used to set to disable the operation of the separation pawl of the photoconductor drum.
61	1	Used to test the operation of the LSU.
63	1	Used to check the result of shading correction. (The shading correction data are displayed.)
	7	Used to adjust the SPF white correction start pixel position automatically. This adjustment is performed after the lens unit is replaced.
64	1	Used to check the operation of the printer function (auto print operation).
65	5	Used to check the operation panel.

Code		Function
Main	Sub	
66	1	FAX related soft SW setting
	2	Initial set for the value of the FAX soft SW
	3	FAX PWB memory check
	4	Signal send mode
	6	Printing the confidential password
	7	Image data print
	8	Voice Message send
	10	Image data memory clear
	11	300bps signals send
	13	Send test and adjustment of the dial pulse and DTMF signal.
	17	DTMF signal send
	21	FAX information print
	22	Handset sound volume adjustment
	30	TEL/LIU state change recognition
	32	Receive data check
	34	Communication time measurement display
	37	Speaker sound volume adjustment
	38	Time setting/check
	41	CI signal check
	50	FAST SRAM clear
	51	Signal detection check
	52	Pseudo-ringer check
	53	SRAM backup
67	11	Used to set the Select-IN signal.
	14	Used to check write/comparison of flash programs.
	17	Used to clear NVRAM.
	18	Used to clear the data area for FLASH ROM Network Scanner Application.
	20	Used to check the network connection when a scanner option is installed.

3. Details

1

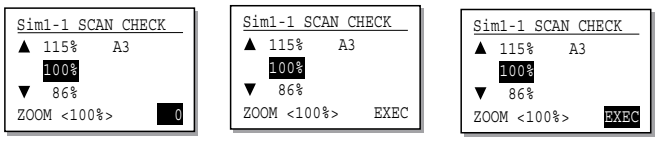
1-1

Purpose	Operation test/check
Function (Purpose)	Used to check the operation of the scanner unit and its control circuit.
Section	Optical (Image scanning)
Item	Operation

Operation/procedure (Pattern 10)

Enter the number, set the magnification ratio and the original size and press the [OK] key, and the scanner unit will operate in a speed corresponding to the setup.

(Initial screen) (Input/Selection screen) (Executing screen)



The fixed magnification ratio (25% to 400%) can be changed in 11 steps with [↑] [↓] keys.

(AB series) → 25 → 50 → 70 → 81 → 86 → 100 → 115 → 122 → 141 → 200 → 400

(Inch series) 25 → 50 → 64 → 77 → 95 → 100 → 121 → 129 → 141 → 200 → 400

The scan counter is displayed during execution.

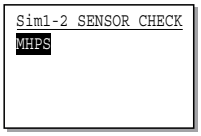
Magnification ratio	25% to 400%
Default	100%
Document size	Varies depending on the destination.
Set number of times	1 to 999 (0: Continuous operation)

1-2

Purpose	Operation test/check
Function (Purpose)	Used to check the operation of sensor and detector in the scanning (read) section and the related circuit.
Section	Optical (Image scanning)
Item	Operation

Operation/procedure

The status of sensors and detectors in the scanner section is displayed. The active sensors and detectors are highlighted.



MHPS	Mirror home position sensor

2

2-1

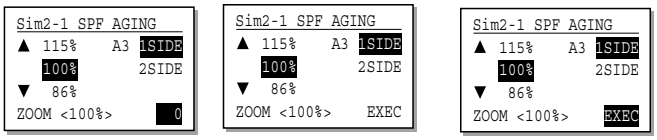
Purpose	Operation test/check
Function (Purpose)	Used to check the operation of the SPF unit and the related circuit.
Section	SPF
Item	Operation

Operation/procedure (Pattern 11)

Set a document on the APF paper feed tray, and fix it with tape.

Enter the number, set the magnification ratio and the original size and press the [OK] key, and the SPF unit will operate in a speed corresponding to the setup.

(Initial screen) (Input/Selection screen) (Executing screen)



The magnification ratio can be selected in the range of 50% – 200% in 9 steps with ↑ ↓ keys.

(AB series) 50 → 70 → 81 → 86 → 100 → 115 → 122 → 141 → 200

(Inch series) 50 → 64 → 77 → 95 → 100 → 121 → 129 → 141 → 200

The scan counter is displayed during execution.

Magnification ratio	50% to 200%
Default	100%
Document size	Varies depending on the destination.
Single/duplex	Selectable only when RSPF is installed, fixed (single) for SPF.
Set number of times	1 to 999 (0: Continuous operation)

Note: Executable only when the SPF/RSPF is installed.

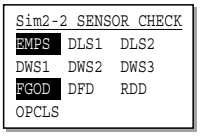
2-2

Purpose	Operation test/check
Function (Purpose)	Used to check the operation of sensors and detectors in the SPF unit and the related circuit.
Section	SPF
Item	Operation

Operation/procedure

The operations of sensors and detectors in the SPFsection are displayed.

The active sensors and detectors are highlighted.



EMPS	Empty sensor
DLS1	Tray length sensor (small)
DLS2	Tray length sensor (large)
DWS1	Tray width sensor (small)
DWS2	Tray width sensor (middle)
DWS3	Tray width sensor (large)
FGOD	Paper feed cover sensor
DFD	Document entry detection sensor
RDD	Document exit sensor
OPCLS	Book sensor

Note: Executable only when the SPF/RSPF is installed.

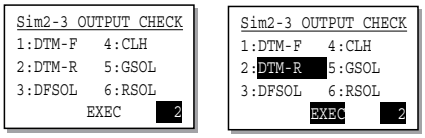
2-3

Purpose	Operation test/check
Function (Purpose)	Used to check the operation of the loads in the SPF unit and the control circuits.
Section	SPF
Item	Operation

Operation/procedure (Pattern 9)

The names of the loads which can be operated are displayed. Select the load to be checked with the 10-key.

(Initial screen) (Executing screen)



1:DTM-F	SPF motor forward rotation
2:DTM-R	SPF motor reverse rotation
3:DFSOL	SPF document pick-up solenoid
4:CLH	SPF document exit transport clutch
5:GSOL	RSPF document exit gate solenoid
6:RSOL	RSPF document pressure solenoid

The motor for 10sec, the solenoid ON for 500msec, OFF for 500msec. (20 times)

Note: Executable only when the SPF/RSPF is installed.

3

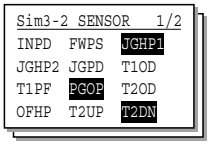
3-2

Purpose	Operation test/check
Function (Purpose)	Used to check the operation of sensor and detector in the finisher and the related circuit.
Section	Sorter/Finisher
Item	Operation

Operation/procedure

Used to display the operations of sensors and detectors in the finisher section.

The active sensors and detectors are highlighted.



INPD	Finisher paper entry sensor
FWPS	Paper width sensor
JGHP1	Side guide plate HP sensor
JGHP2	Rear edge plate HP sensor
JGPD	Tray paper empty sensor
T1OD	1st tray exit sensor
T1PF	1st tray paper full sensor
PGOP	JAM processing PG open/close detection sensor
T2OD	2nd tray transport sensor
OFHP	Offset HP sensor
T2UP	Tray position sensor (upper)
T2DN	Tray position sensor (lower)
JGDSW	Tray jam processing interlock
EVRE	Lift-up drive control sensor
STHP	Staple HP sensor
READY	Self priming sensor
LSTS	Staple empty sensor
NCTS	Cartridge empty sensor
STND	Staple supply cover open/close sensor
T2PUD	2nd tray upper surface sensor

Note: Executable only when the finisher is installed.

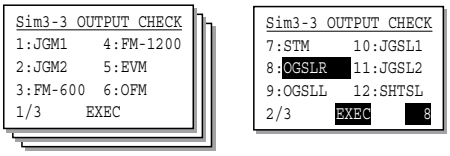
3-3

Purpose	Operation test/check
Function (Purpose)	Used to check the operation of the load in the finisher and the control circuit.
Section	Sorter/Finisher
Item	Operation

Operation/procedure (Pattern 9)

The names of the loads which can be operated are displayed. Select the load to be checked with the key.

(Initial screen) (Executing screen)



During execution, [EXEC] is highlighted. Under this state, press the [BACK] key to interrupt the operation.

1:JGM1	Side guide plate drive motor
2:JGM2	Rear edge plate drive motor
3:FM-600	Finisher main motor (600dpi)
4:FM-1200	Finisher main motot (1200dpi)
5:EVM	Tray lift-up motor
6:OFM	Tray offset motor
7:STM	Staple operation motor
8:OGSLR	Transport selection gate solenoid (R)
9:OGSLL	Transport selection gate solenoid (L)
10:JGSL1	Rear edge plate drive solenoid
11:JGSL2	Upper alignment plate drive solenoid
12:SHTSL	Shutter drive solenoid
13:T2SCL	Paper exit roller clutch
14:STGSL	Paper holding solenoid

The finisher main motor operates for 10sec, the staple motor 5 times, the tray lift-up motor one reciprocating operation, other motors max. 20 reciprocating operations from the home position, the solenoid repeats 500msec ON and 500msec OFF 20 times.

The staple operation motor operates only when there is no cartridge installed.

Note: Executable only when the finisher is installed.

3-6

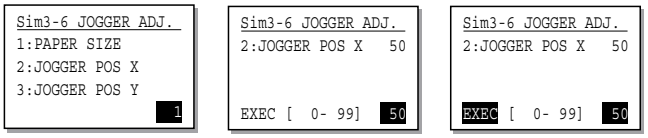
Purpose	Adjustment
Function (Purpose)	Used to adjust the finisher jogger position.
Section	Sorter/Finisher
Item	Operation

Operation/procedure (Pattern 4)

After the paper size is set, the side guide plate and the rear guide plate are set.

Shifts to the specified paper size position.

(Initial screen) (Input screen) (Executing screen)



Display items	Content	Setting range	Default
1:PAPER SIZE	Paper size (1:A3, 2:A4, 3:B4, 4:B5, 5:A4R, 6:WLT, 7:LT, 8:LG, 9:FC, 10:LTR, 11:8K, 12:16K)	1-12	
2:JOGGER POS X	Side guide plate	1-99	50
3:JOGGER POS Y	Rear edge guide plate		

There are 6 adjustment values for the side guide plate, and 12 for the rear guide plate. The adjustment position is determined from the table below according to the paper size.

Example: When the side guide plate value is adjusted in A3, the same adjustment is made in A4. (Value 1 in the table)

Paper size	Side guide plate adjustment value number	Adjustment value number of the rear edge guide plate
A3	1	2
A4	1	9
B4	3	3
B5	3	10
A4R	5	6
WLT	2	1
LT	2	8
LG	4	4
FC	4	5
LTR	4	7
8K	6	11
16K	6	12

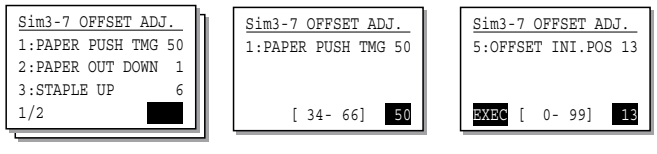
Note: Executable only when the finisher is installed.

3-7

Purpose	Adjustment
Function (Purpose)	Used to adjust the offset tray operations.
Item	Operation

Operation/procedure

(Initial screen) (Input/Selection screen) (Executing screen)



Display items	Content	Installation range	Default
1:PAPER PUSH TMG	Paper holder descending timing in non-staple	34-66	50
	Used to adjust the descending timing of the paper holder lever before lift-up operation after paper exit or offset operation. (The paper holder lever prevents against paper shift in paper top surface detection and paper stacking .)		
2:PAPER OUT DOWN	Tray descending distance after non-staple paper exit	0-12	1
	Used to adjust the offset tray descending distance after non-staple paper exit. The descending distance is the relative distance from the non-staple standby position.		
3:STAPLE UP	Tray lift distance before staple paper exit	0-12	6
	The height of the tray standby position in stapling is changed for that in non-stapling to improve stacking capacity in stapling. (The relative distance for the height of the tray standby position in non-stapling is set.)		
4:STAPLE DOWN	Tray descending distance after staple paper exit	0-12	6
	Used to adjust the offset tray descending distance after staple paper exit. The descending distance is the relative distance from the non-staple standby position.		
5:OFFSET INI.POS	Offset tray shift position adjustment	0-99	13
	Used to shift the offset tray to the shipment position or the disassembly position. The offset tray is shifted to the specified counter position. (In the case of 0 - 94 (Shipment position: 13)) 1) Initialize the offset tray normally. 2) The tray descends to the parameter position + 1 pulse position. 3) The tray lifts up to the specified parameter position. (Disassembly position: 94 - 99) 1) The tray descends to the bottom. * If there is some paper in the offset tray, the tray cannot descend to the specified position. Check to insure that there is no paper in the tray before execution.		

Note: Executable only when the finisher is installed.

3-11

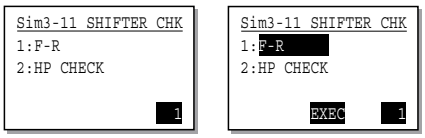
Purpose	Operation test/check
Function (Purpose)	Used to check the operation of the shifter.
Item	Operation

Operation/procedure (Pattern 12)

[Selection 1]

Select with the 10-key.

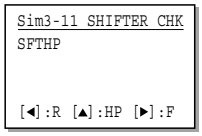
(Initial screen) (Executing screen)



1:F-R	Reciprocating operation
2:HP CHECK	Home position check

[Selection 2]

(Input/Selection screen)



SFTHP: Shifter home position (At detection, highlighted)

[←] key	Shifts the position toward R side by the specified steps.
[→] key	Shifts the position toward F side by the specified steps.
[↑] key	Shifts to the home position.

4

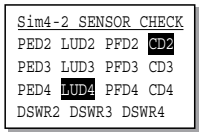
4-2

Purpose	Operation test/check
Function (Purpose)	Used to check the operation of sensor and detector in the option tray and the related circuit.
Section	Paper feed
Item	Operation

Operation/procedure

The operating states of the sensor and the detector are displayed.

The active sensors and detectors are highlighted.



PED2	2nd cassette paper empty sensor
LUD2	2nd cassette paper upper limit detection sensor
PFD2	2nd cassette paper pass sensor
CD2	2nd cassette empty sensor
PED3	3rd cassette paper empty sensor
LUD3	3rd cassette paper upper limit detection sensor
PFD3	3rd cassette paper pass sensor
CD3	3rd cassette empty sensor
PED4	4th cassette paper empty sensor
LUD4	4th cassette paper upper limit detection sensor
PFD4	4th cassette paper pass sensor
CD4	4th cassette empty sensor
DSWR3	3rd cassette right door detection sensor
DSWR2	2nd cassette right door detection sensor
DSWR4	4th cassette right door detection sensor

Note: Execution is possible only when the option cassette is installed.

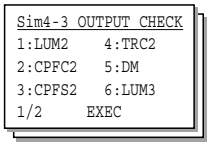
4-3

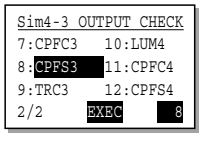
Purpose	Operation test/check
Function (Purpose)	Used to check the operation of the load in the option tray and the control circuit.
Section	Paper feed
Item	Operation

Operation/procedure (Pattern 9)

Select the load to check with the 10-key.
During execution of load operation, [EXEC] is highlighted.
Pressing the [BACK] key under this state interrupts the operation.

(Initial screen) (Executing screen)





1:LUM2	2nd cassette lift-up motor
2:CPFC2	2nd cassette pick-up solenoid
3:CPFS2	2nd cassette paper feed clutch
4:TRC2	2nd cassette transport roller clutch
5:DM	2nd cassette paper transport motor (3rd cassette paper transport motor)
6:LUM3	3rd cassette lift-up motor
7:CPFC3	3rd cassette pick-up solenoid
8:CPFS3	3rd cassette paper feed clutch
9:TRC3	3rd cassette transport roller clutch
10:LUM4	4th cassette lift-up motor
11:CPFC4	4th cassette pick-up solenoid
12:CPFS4	4th cassette paper feed clutch

The motor for 10sec, the solenoid ON for 500msec, OFF for 500msec.

The lift-up motor operates only when the tray is opened. (20 times)

Note: Execution is possible only when the option cassette is installed.

5

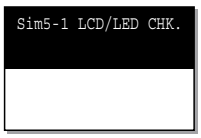
5-1

Purpose	Operation test/check
Function (Purpose)	Used to check the operation of the display, LCD in the operation panel, and control circuit.
Section	Operation (screen/operation)
Item	Operation

Operation/procedure

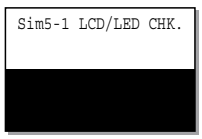
The LCD is displayed as follows. (All LED's are ON.)

(Initial screen)



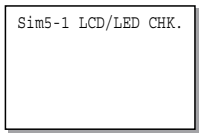
With the upper half section highlighted, contrast changes "Standard → MAX → MIN." in every 2sec.

(6 sec later)



With the lower half section highlighted, contrast changes "Standard → MAX → MIN." in every 2sec.

(6 sec later)



The back light changes in the sequence of "OFF → Red → Yellow → Green" every 2 seconds.

5-2

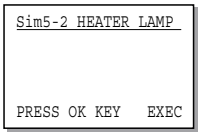
Purpose	Operation test/check
Function (Purpose)	Used to check the operation of the heater lamp and the control circuit.
Section	Fixing (Fusing)
Item	Operation

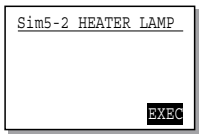
Operation/procedure (Pattern 8)

Press the [OK] key.

ON/OFF operation of the heater lamp is repeated 5 times in an interval of 500ms.

(Initial screen) (Executing screen)





5-3

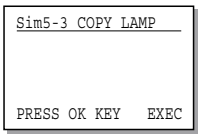
Purpose	Operation test/check
Function (Purpose)	Used to check the operation of the copy lamp and the control circuit.
Section	Optical (Image scanning)
Item	Operation

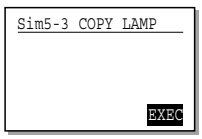
Operation/procedure (Pattern 8)

Press the [OK] key.

The copy lamp lights up for 10 sec.

(Initial screen) (Executing screen)





When 10 sec passed, the copy lamp is turned OFF.

6

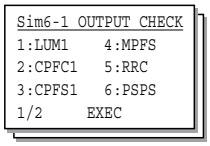
6-1

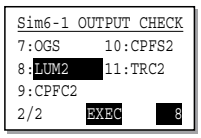
Purpose	Operation test/check
Function (Purpose)	Used to check the operation of the loads (clutches and solenoids) in the paper transport system and the control circuit.
Section	Paper transport (Discharge/Switchback/Transport)
Item	Operation

Operation/procedure (Pattern 9)

The names of the loads which can be operated are displayed. Select the load to be checked with the 10-key.

(Initial screen) (Executing screen)





1:LUM1	1st cassette lift-up motor
2:CPFC1	1st cassette pick-up solenoid
3:CPFS1	1st cassette paper feed clutch
4:MPFS	Manual feed pick-up solenoid
5:RRC	Resist roller clutch
6:PSPS	Separation pawl solenoid
7:OGS	Paper exit gate switching solenoid
8:LUM2	2nd cassette lift-up motor
9:CPFC2	2nd cassette pick-up solenoid
10:CPFS2	2nd cassette paper feed clutch
11:TRC2	2nd cassette transport roller clutch
12:LUM3	3rd cassette lift-up motor
13:CPFC3	3rd cassette pick-up solenoid
14:CPFS3	3rd cassette paper feed clutch
15:TRC3	3rd cassette transport roller clutch
16:LUM4	4th cassette lift-up motor
17:CPFC4	4th cassette pick-up solenoid
18:CPFS4	4th cassette paper feed clutch

The motor for 10sec, the solenoid ON for 500msec, OFF for 500msec. (20 times)

The lift-up motor operates only when the tray is opened.

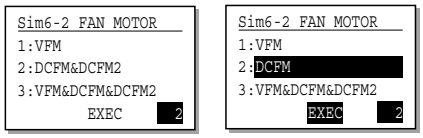
6-2

Purpose	Operation test/check
Function (Purpose)	Used to check the operation of each fan motor and its control circuit.
Section	Others
Item	Operation

Operation/procedure (Pattern 9)

The names of the loads which can be operated are displayed. Select the load to be checked with the key.

(Initial screen) (Executing screen)



The selected fan motor is highlighted and it rotates for 10sec.

1:VFM	Only the fusing fan operates
2:DCFM&DCFM2	Power cooling fan, power cooling fan 2 operations
3:VFM&DCFM&DCFM2	Fusing fan, power cooling fan, and power cooling fan 2 are operated at the same time.

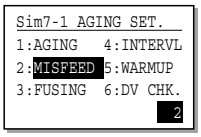
7

7-1

Purpose	Setting/Operation test/check
Function (Purpose)	Used to set the aging operation conditions.
Item	Operation

Operation/procedure

Select with the 10-key.



1:AGING	Aging enable/disable setting
2:MISFEED	Jam detection enable/disable setting
3:FUSING	Fusing operation enable/disable setting The fusing temperature is not controlled. The heater is not turned ON.
4:INTERVL	Intermittent setting (Valid only when set to AGING.)
5:WARMUP	Warm-up save setting The machine goes into the ready state only by shading, disregarding fusing and process control. After going into the ready state, normal control is performed.
6:DV CHK.	Developing unit detection enable/disable setting

Press [CA] key, and the simulation will be terminated and copying will be made with the set contents.

When selected without setup, the selected value is registered and highlighted. When selected with previous setup, the previous setup is canceled and it is displayed normally.

This setting is canceled by power OFF.

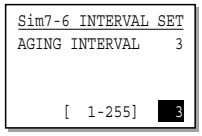
Note: In SIM 7-1, pressing [CA] key terminates the simulation and the machine enters the aging mode without resetting. Therefore, to perform "4. Intermittent setup," the intermittent cycle must be set with SIM 7-6 in advance.
Reset is not performed when the machine enters the aging mode.

7-6

Purpose	Setting/Operation test/check
Function (Purpose)	Used to set the cycle of intermittent aging.
Item	Operation

Operation/procedure (Pattern 1)

Enter the interval aging cycle time (sec) with the 10-key pad . Refer to 7-1.



Setting range	1-255
Default	3

7-8

Purpose	Setting/Operation test/check
Function (Purpose)	Used to set the display of the warm-up time.
Item	Operation

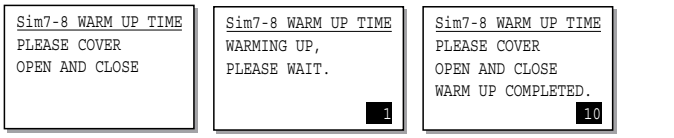
Operation/procedure

Warm-up starts by the cover open/close.

(Can be performed repeatedly by open/close of the cover.)

The warm-up time is counted up and displayed in the unit of sec.

(Initial screen) (Executing screen) (Initial screen after completion)



If the [CA] key is pressed at this time, count-up is interrupted to terminate the simulation. (However, warm-up is continued.)

After completion of warming up, "WARM UP COMPLETED" is displayed and the control returns to the initial screen.

8

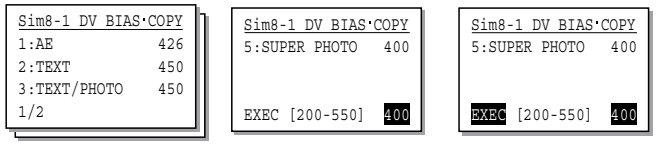
8-1

Purpose	Adjustment/Operation test/check
Function (Purpose)	Used to check and adjust the operation of the developing bias voltage in each copy mode and the control circuit.
Section	Image process (Photoconductor/Developping/Transfer/Cleaning)
	Developer/Toner hopper

Operation/procedure (Pattern 4)

After selecting the mode, enter the adjustment value and press the [OK] key, and output will be made for 30sec.

(Initial screen) (Input/Selection screen) (Executing screen)



Display items	Content	Installation range	Default
1:AE	AE (∗)	200-550	426 (–426V)
2:TEXT	Character		450 (–450V)
3:TEXT/PHOTO	Character/Photo		450 (–450V)
4:PHOTO	Photo		450 (–450V)
5:SUPER PHOTO	Super photo		400 (–400V)
6:TONER SAVE	Toner save		376 (–376V)

(∗) Linked with the destinations of SIM 26-6.
Linked with the auto exposure mode of SIM 46-19-1.

The minimum increment is 2V.
The result of (Set value – 199) / 2 is stored in the EEPROM.
When reading a value from the EEPROM, the value of (EEP value *2) + 200 is used as the set value.
Therefore, the set value entered must be an even number. If an odd number is entered the entered odd number + 1 is displayed after pressing [OK] key.

8-2

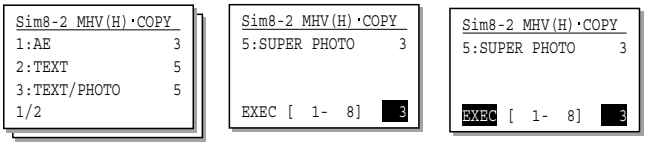
Purpose	Adjustment/Operation test/check
Function (Purpose)	Used to check and adjust the operation of the main charger grid voltage (high mode) in each copy mode and the control circuit.
Section	Image process (Photoconductor/Developping/Transfer/Cleaning)
	Photo conductor

Operation/procedure (Pattern 4)

After selecting the mode, enter the adjustment value and press the [OK] key, and output will be made for 30sec.

The input value is in the increment of –25V.

(Initial screen) (Input/Selection screen) (Executing screen)



Display items	Content	Setting range	Default
1:AE	AE (∗)	1-8	4 (–555V)
2:TEXT	Character		5 (–580V)
3:TEXT/PHOTO	Character/Photo		5 (–580V)
4:PHOTO	Photo		5 (–580V)
5:SUPER PHOTO	Super photo		3 (–530V)
6:TONER SAVE	Toner save		2 (–505V)

(∗) Linked with the destinations of SIM 26-6.
Linked with the auto exposure mode of SIM 46-19-1.

NO.	Set value	Grid High	Grid Low
1	480	–480V	–350V
2	505	–505V	–375V
3	530	–530V	–400V
4	555	–555V	–425V
5	580	–580V	–450V
6	605	–605V	–475V
7	630	–630V	–500V
8	655	–655V	–525V

*1. The negative value of the set value corresponds to the grid high output voltage.

*2. The set values can be selected from the above 8 patterns only.

*3. The selected pattern determines the grid high voltage and the grid low voltage.
If, for example, the grid high voltage is set to –480V (pattern 1), the grid low voltage is –350V.

8-3

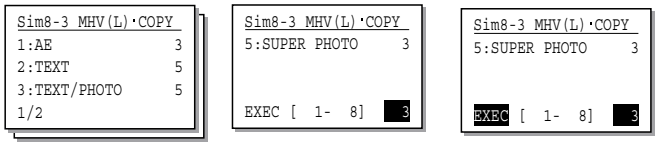
Purpose	Adjustment/Operation test/check
Function (Purpose)	Used to check and adjust the operation of the main charger grid voltage (low mode) in each copy mode and the control circuit.
Section	Image process (Photoconductor/Developping/Transfer/Cleaning)
	Photo conductor

Operation/procedure (Pattern 4)

After selecting the mode, enter the adjustment value and press the [OK] key, and output will be made for 30sec.

The input value is in the increment of –25V.

(Initial screen) (Input/Selection screen) (Executing screen)



Display items	Content	Setting range	Default
1:AE	AE (∗)	1-8	4 (–425V)
2:TEXT	Character		5 (–450V)
3:TEXT/PHOTO	Character/Photo		5 (–450V)
4:PHOTO	Photo		5 (–450V)
5:SUPER PHOTO	Super photo		3 (–400V)
6:TONER SAVE	Toner save		2 (–375V)

(∗) Linked with the destinations of SIM 26-6.
Linked with the auto exposure mode of SIM 46-19-1.

NO.	Set value	Grid High	Grid Low
1	480	–480V	–350V
2	505	–505V	–375V
3	530	–530V	–400V
4	555	–555V	–425V
5	580	–580V	–450V
6	605	–605V	–475V
7	630	–630V	–500V
8	655	–655V	–525V

*1. The negative value of the set value corresponds to the grid high output voltage.

*2. The set values can be selected from the above 8 patterns only.

*3. The selected pattern determines the grid high voltage and the grid low voltage.
If, for example, the grid high voltage is set to –480V (pattern 1), the grid low voltage is –350V.

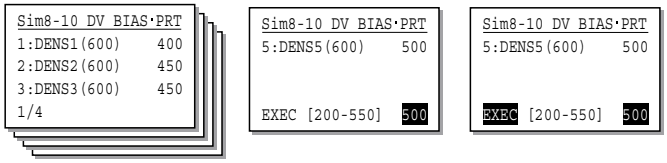
8-10

Purpose	Adjustment/Operation test/check
Function (Purpose)	Used to check and adjust the operation of the developing bias voltage in each printer mode and the control circuit.
Section	Image process (Photoconductor/Developping/Transfer/Cleaning)
	Developer/Toner hopper

Operation/procedure (Pattern 4)

After selecting the mode, enter the adjustment value and press the [OK] key, and output will be made for 30sec.

(Initial screen) (Input/Selection screen) (Executing screen)



Display items	Content	Installation range	Default
1:DENS1(600)	Density 1 (600dpi)	200-550	400 (–400V)
2:DENS2(600)	Density 2 (600dpi)		450 (–450V)
3:DENS3(600)	Density 3 (600dpi)		450 (–450V)
4:DENS4(600)	Density 4 (600dpi)		450 (–450V)
5:DENS5(600)	Density 5 (600dpi)		500 (–500V)
6:TS(600)	Toner save (600dpi)		350 (–350V)
7:DENS1(1200)	Density 1 (1200dpi)		300 (–300V)
8:DENS2(1200)	Density 2 (1200dpi)		350 (–350V)
9:DENS3(1200)	Density 3 (1200dpi)		376 (–376V)
10:DENS4(1200)	Density 4 (1200dpi)		426 (–426V)
11:DENS5(1200)	Density 5 (1200dpi)		500 (–500V)

The minimum increment is 2V.

The result of (Set value – 199) / 2 is stored in the EEPROM.

When reading a value from the EEPROM, the value of (EEP value *2) + 200 is used as the set value.

Therefore, the set value entered must be an even number. If an odd number is entered the entered odd number + 1 is displayed after pressing [OK] key.

8-11

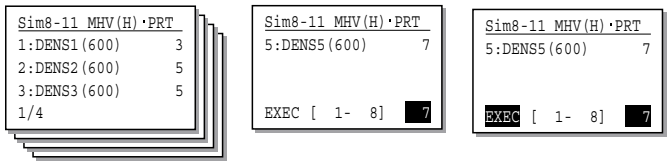
Purpose	Adjustment/Operation test/check
Function (Purpose)	Used to check and adjust the operation of the main charger grid voltage (high mode) in each printer mode and the control circuit.
Section	Image process (Photoconductor/Developping/Transfer/Cleaning)
	Photo conductor

Operation/procedure (Pattern 4)

After selecting the mode, enter the adjustment value and press the [OK] key, and output will be made for 30sec.

The input value is in the increment of –25V.

(Initial screen) (Input/Selection screen) (Executing screen)



Display items	Content	Installation range	Default
1:DENS1(600)	Density 1 (600dpi)	1-8	5 (–580V)
2:DENS2(600)	Density 2 (600dpi)		5 (–580V)
3:DENS3(600)	Density 3 (600dpi)		5 (–580V)
4:DENS4(600)	Density 4 (600dpi)		5 (–580V)
5:DENS5(600)	Density 5 (600dpi)		7 (–630V)
6:TS(600)	Toner save (600dpi)		3 (–530V)
7:DENS1(1200)	Density 1 (1200dpi)		1 (–480V)
8:DENS2(1200)	Density 2 (1200dpi)		3 (–530V)
9:DENS3(1200)	Density 3 (1200dpi)		4 (–555V)
10:DENS4(1200)	Density 4 (1200dpi)		5 (–580V)
11:DENS5(1200)	Density 5 (1200dpi)		7 (–630V)

NO.	Set value	Grid High	Grid Low
1	480	–480V	–350V
2	505	–505V	–375V
3	530	–530V	–400V
4	555	–555V	–425V
5	580	–580V	–450V
6	605	–605V	–475V
7	630	–630V	–500V
8	655	–655V	–525V

*1. The negative value of the set value corresponds to the grid high output voltage.

*2. The set values can be selected from the above 8 patterns only.

*3. The selected pattern determines the grid high voltage and the grid low voltage.
If, for example, the grid high voltage is set to –480V (pattern 1), the grid low voltage is –350V.

8-12

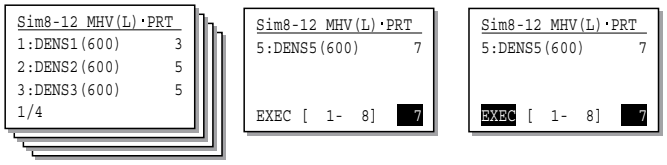
Purpose	Adjustment/Operation test/check
Function (Purpose)	Used to check and adjust the operation of the main charger grid voltage (low mode) in each printer mode and the control circuit.
Section	Image process (Photoconductor/Developping/Transfer/Cleaning)
	Photo conductor

Operation/procedure (Pattern 4)

After selecting the mode, enter the adjustment value and press the [OK] key, and output will be made for 30sec.

The input value is in the increment of –25V.

(Initial screen) (Input/Selectionscreen) (Executing screen)



Display items	Content	Installation range	Default
1:DENS1(600)	Density 1 (600dpi)	1-8	5 (–450V)
2:DENS2(600)	Density 2 (600dpi)		5 (–450V)
3:DENS3(600)	Density 3 (600dpi)		5 (–450V)
4:DENS4(600)	Density 4 (600dpi)		5 (–450V)
5:DENS5(600)	Density 5 (600dpi)		7 (–500V)
6:TS(600)	Toner save (600dpi)		3 (–400V)
7:DENS1(1200)	Density 1 (1200dpi)		1 (–350V)
8:DENS2(1200)	Density 2 (1200dpi)		3 (–400V)
9:DENS3(1200)	Density 3 (1200dpi)		4 (–425V)
10:DENS4(1200)	Density 4 (1200dpi)		5 (–450V)
11:DENS5(1200)	Density 5 (1200dpi)		7 (–500V)

NO.	Set value	Grid High	Grid Low
1	480	–480V	–350V
2	505	–505V	–375V
3	530	–530V	–400V
4	555	–555V	–425V
5	580	–580V	–450V
6	605	–605V	–475V
7	630	–630V	–500V
8	655	–655V	–525V

*1. The negative value of the set value corresponds to the grid high output voltage.

*2. The set values can be selected from the above 8 patterns only.

*3. The selected pattern determines the grid high voltage and the grid low voltage.
If, for example, the grid high voltage is set to –480V (pattern 1), the grid low voltage is –350V.

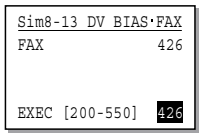
8-13

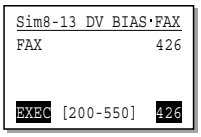
Purpose	Adjustment/Operation test/check
Function (Purpose)	Used to check and adjust the operation of the developing bias voltage in FAX mode and the control circuit.
Section	Image process (Photoconductor/Developping/Transfer/Cleaning)
	Developer/Toner hopper

Operation/procedure (Pattern 3)

Enter the adjustment value and press the [OK] key, and output operation is performed for 30sec.

(Initial screen) (Executing screen)





Setting range	200-550
Default	426

The minimum increment is 2V.
The result of (Set value – 199) / 2 is stored in the EEPROM.
When reading a value from the EEPROM, the value of (EEP value *2) + 200 is used as the set value.
Therefore, the set value entered must be an even number. If an odd number is entered the entered odd number + 1 is displayed after pressing [OK] key.

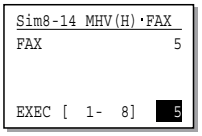
8-14

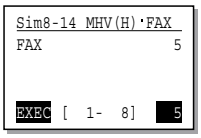
Purpose	Adjustment/Operation test/check
Function (Purpose)	Used to check and adjust the operation of the main charger grid voltage (high mode) in FAX mode and the control circuit.
Section	Image process (Photoconductor/Developping/Transfer/Cleaning)
	Photo conductor

Operation/procedure (Pattern 3)

Enter the adjustment value and press the [OK] key, and output operation is performed for 30sec.

(Initial screen) (Executing screen)





Setting range	1-8
Default	5

NO.	Set value	Grid High	Grid Low
1	480	–480V	–350V
2	505	–505V	–375V
3	530	–530V	–400V
4	555	–555V	–425V
5	580	–580V	–450V
6	605	–605V	–475V
7	630	–630V	–500V
8	655	–655V	–525V

*1. The negative value of the set value corresponds to the grid high output voltage.

*2. The set values can be selected from the above 8 patterns only.

*3. The selected pattern determines the grid high voltage and the grid low voltage.
If, for example, the grid high voltage is set to –480V (pattern 1), the grid low voltage is –350V.

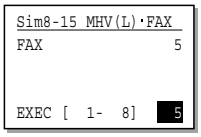
8-15

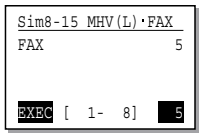
Purpose	Adjustment/Operation test/check
Function (Purpose)	Used to check and adjust the operation of the main charger grid voltage (low mode) in FAX mode and the control circuit.
Section	Image process (Photoconductor/Developping/Transfer/Cleaning)
	Photo conductor

Operation/procedure (Pattern 3)

Enter the adjustment value and press the [OK] key, and output operation is performed for 30sec.

(Initial screen) (Executing screen)





Setting range	1-8
Default	5

NO.	Set value	Grid High	Grid Low
1	480	–480V	–350V
2	505	–505V	–375V
3	530	–530V	–400V
4	555	–555V	–425V
5	580	–580V	–450V
6	605	–605V	–475V
7	630	–630V	–500V
8	655	–655V	–525V

*1. The negative value of the set value corresponds to the grid high output voltage.

*2. The set values can be selected from the above 8 patterns only.

*3. The selected pattern determines the grid high voltage and the grid low voltage.
If, for example, the grid high voltage is set to –480V (pattern 1), the grid low voltage is –350V.

9

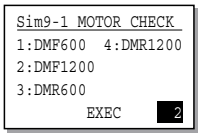
9-1

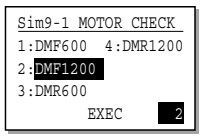
Purpose	Operation test/check
Function (Purpose)	Used to check and adjust the operation of the load (motor) in the duplex section and the control circuit.
Section	Duplex
Item	Operation

Operation/procedure (Pattern 9)

Select with the 10-key and operate for 30 seconds.

(Initial screen) (Executing screen)





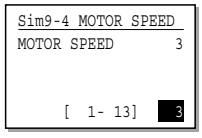
1:DMF600	Duplex motor forward rotation (600dpi)
2:DMF1200	Duplex motor forward rotation (1200dpi)
3:DMR600	Duplex motor reverse rotation (600dpi)
4:DMR1200	Duplex motor reverse rotation (1200dpi)

9-4

Purpose	Operation test/check
Function (Purpose)	Used to adjust the rotation speed of the duplex motor.
Section	Duplex
Item	Operation

Operation/procedure (Pattern 1)

Set the rotation speed of the duplex motor.



Setting range	1-13
Default	3

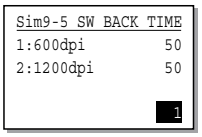
9-5

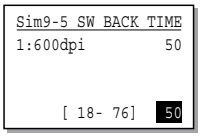
Purpose	Adjustment
Function (Purpose)	Used to adjust the switch back time of the duplex motor.

Operation/procedure (Pattern 2)

Set the switch back time of the duplex motor.

(Initial screen) (Input screen)





Display items	Installation range	Default
1:600dpi	18-76	50
2:1200dpi		50

10

10-0

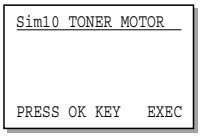
Purpose	Operation test/check	
Function (Purpose)	Used to check the operation of the toner motor and its control circuit.	
Section	Image process (Photoconductor/Developping/Transfer/Cleaning)	
	Developer/Toner hopper	
Item	Operation	

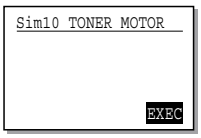
Operation/procedure (Pattern 8)

Press the [OK] key and operate the toner motor for 30 sec.

Pressing the [INTERRUPT] key interrupts the operation, and the display returns to the main code entry screen.

(Initial screen) (Executing screen)





14

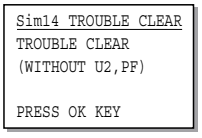
14-0

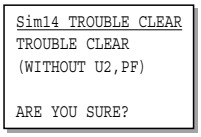
Purpose	Clear/Cancel (Trouble etc.)	
Function (Purpose)	Used to cancel excluding the self-diag U2/PF troubles.	
Item	Trouble	Error

Operation/procedure (Pattern 6)

When the [OK] key is pressed, the trouble is canceled.

(Initial screen) (Process check screen)





16

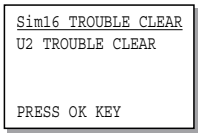
16-0

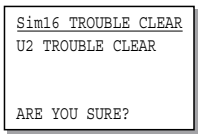
Purpose	Clear/Cancel (Trouble etc.)	
Function (Purpose)	Used to cancel the self-diag U2 trouble.	
Item	Trouble	Error

Operation/procedure (Pattern 6)

When the [OK] key is pressed, the trouble is canceled.

(Initial screen) (Process check screen)





17

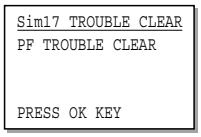
17-0

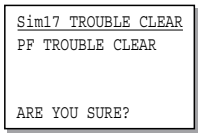
Purpose	Cancel (Trouble, etc)	
Function (Purpose)	Used to cancel the self diag "PF" trouble.	
Item	Trouble	Error

Operation/Procedure (Pattern 6)

When the [OK] key is pressed, the trouble is canceled.

(Initial screen) (Execution check screen)





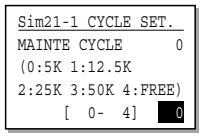
21

21-1

Purpose	Setting	
Function (Purpose)	Used to set the maintenance cycle.	
Item	Specifications	Counter

Operation/procedure (Pattern 1)

Enter the adjustment value and press the [OK] key.



Item	Content	Setting range	Default
0	5K	0-4	3
1	12.5K		
2	25K		
3	50K		
4	FREE		

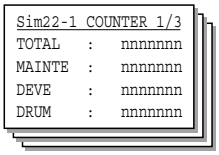
22

22-1

Purpose	Adjustment/setting/operation data output/check (display/print)
Function (Purpose)	Used to check the counter value of each section.
Item	Counter

Operation/procedure

Counter is displayed.



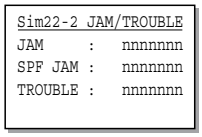
TOTAL	Total	IMC	IMC counter
MAINTE	Maintenance	DUPLEX	Duplex counter
DEVE	Developer counter		
DRUM	Drum counter	OTHERS	The other counters
COPY	Copy counter	FAX SEND	FAX Send counter
PRINTER	Printer counter	FAX RCV	FAX receive counter

22-2

Purpose	Adjustment/setting/operation data output/check (display/print)
Function (Purpose)	Used to check the total numbers of misfeed and troubles. (When the number of misfeed is considerably great, it is judged as necessary for repair. The misfeed rate is obtained by dividing this count value with the total counter value.)
Item	Trouble

Operation/procedure

Counter data is displayed.



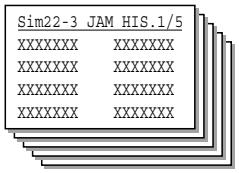
JAM	JAM counter
SPF JAM	SPF JAM counter
TROUBLE	Trouble counter

22-3

Purpose	Adjustment/setting/operation data output/check (display/print)	
Function (Purpose)	Used to check the misfeed positions and the number of misfeed at each position. (When the number of misfeed is considerably great, it can be judged as necessary for repair.)	
Item	Trouble	Mis-feed

Operation/procedure

The misfeed history is displayed in the sequence of recentness by the name of sensors and detectors. Max. 40 items of information can be stored in memory. (The old ones are deleted sequentially.) The trouble section may be determined by the data.



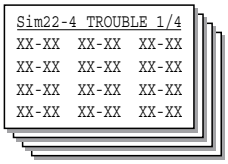
Display items	Jam contents
1ST_PICK	1st cassette pick-up miss
2ND_PICK	2nd cassette pick-up miss
3RD_PICK	3rd cassette pick-up miss
4TH_PICK	4th cassette pick-up miss
HND_PICK	Multi manual feed pick-up miss
PIN_TOP	Paper-in sensor lead edge jam
PIN_END	Paper-in sensor rear edge jam
PIN_DUP	Paper-in sensor reverse jam
DPX_TOP	Duplex sensor lead edge jam
DPX_END	Duplex sensor rear edge jam
UPO_TOP	Upper stage paper exit lead edge jam
UPO_END	Upper stage paper exit rear edge jam
LPO_TOP	Lower stage paper exit lead edge jam
LPO_END	Lower stage paper exit rear edge jam
PS	Abnormality between PS papers.
2ND_TOP	2nd paper pass lead edge jam
2ND_END	2nd paper pass rear edge jam
3RD_TOP	3rd paper pass lead edge jam
3RD_END	3rd paper pass rear edge jam
4TH_TOP	4th paper pass lead edge jam
4TH_END	4th paper pass rear edge jam
DPX_SHORT	Duplex short scale error
DPX_LONG	Duplex long scale error
DPX_DBLFD	Duplex print remain (double feed) jam
FIN_PIN	Finisher paper entry jam
FIN_ESC	Finisher escape tray jam
FIN_OFST	Finisher offset tray jam
FIN_STPL	Finisher staple tray jam

22-4

Purpose	Adjustment/setting/operation data output/check (display/print)
Function (Purpose)	Used to check the total trouble (self diag) history.
Item	Trouble

Operation/procedure

The trouble error codes are displayed in the sequence of the latest one first. Max. 40 items of information are stored. (Older ones are deleted in sequence.) The machine condition can be estimated by this data.

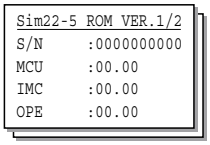


22-5

Purpose	Adjustment/Setting/Check
Function (Purpose)	Used to check the ROM version of each unit (section).
Item	Software

Operation/procedure

ROM and CPU data of each section are displayed.



[Display example]

ROM version 1.250 → [1.25] (upto 2 decimal places)

The display of the protocol monitor and the soft SW follows this display.

S/N	Machine serial number	PRINTER	PRINTER
MCU	Main Control Unit	NIC	NIC
IMC	IMC	FINISHER	FINISHER
OPE	Panel	FAX	FAX

22-7

Purpose	User data output/Check (Display/Print)	
Function (Purpose)	Used to display the key operator code	
Item	Data	User data

Operation/procedure

Key operetion code is displayed.

```
Sim22-7 KEY OPE
KEY OPE CODE: nnnnn
```

22-8

Purpose	Adjustment/setting/operation data output/check (display/print)
Function (Purpose)	Used to check the number of use of the staple, the SPF, and scanning.
Item	Counter

Operation/procedure

The data shows the use frequency of each section.

```
Sim22-8 ORG./STAPLE
SPF     :   nnnnnnn
SCAN    :   nnnnnnn
STAPLE  :   nnnnnnn
```

SPF	SPF counter
SCAN	Scan counter
STAPLE	Stapler counter

22-9

Purpose	Adjustment/setting/operation data output/check (display/print)
Function (Purpose)	Used to check the number of use of each paper feed section. (the number of prints)
Section	Paper feed
Item	Counter

Operation/procedure

The data shows the use frequency of each paper feed section.

```
Sim22-9 FEED    1/2
BYPASS  :   nnnnnnn
TRAY1   :   nnnnnnn
TRAY2   :   nnnnnnn
TRAY3   :   nnnnnnn
```

BYPASS	Manual feed counter	TRAY3	Tray 3 counter
TRAY1	Tray 1 counter	TRAY4	Tray 4 counter
TRAY2	Tray 2 counter		

22-10

Purpose	Adjustment/setting/operation data output/check (display/print)	
Function (Purpose)	Used to check the system configulation.	
Item	Specifications	Option

Operation/procedure

The detected machine composition is displayed.

```
Sim22-10 SYSTEM 1/4
SPEED   : XXXXXXX
DF      : XXXXXXX
OUTPUT  : XXXXXXX
CASETTE1: XXXXXXX
```

Display items	Display items
SPEED	23CPM/25CPM/27CPM
DF	NONE/[1: SPF]/[2: RSPF]
OUTPUT	NONE/[3: Finisher]/[4: Job separator]
CASETTE1	NONE/[5: One-step paper feed unit]
CASETTE2	NONE/[6: Two-step paper feed unit]
IMC MEM	NONE/Expansion memory capacity (MB)
PCL	NONE/[7: PCL]
PS3	NONE/[8: PS3]
NIC	NONE/[9: NIC]
SCANNER	NONE/[10: SCANNER]
FAX	NONE/[11: FAX]
FAX MEM	NONE/Memory capacity (MB)
HAND SET	NONE/[12: Handset]

NONE: "- - - - - - - - -" is displayed.

[ ]: Shows the product code in the list below.

No.	Item	Model code	
		AR model	DM model
1	SPF	AR-SP4	DM-SP2
2	RSPF	AR-RP3	DM-RP1
3	Finisher	AR-FN5	DM-FN1
4	Job separator	AR-TR3	STANDARD
5	1 tray paper feed unit	AR-D11 (*1)	DM-DE3 (*1)
6	2 tray paper feed unit	AR-D12 (*1)	DE-DE4 (*)
7	PCL	AR-P11	STANDARD
8	PS3	AR-PK1	STANDARD
9	NIC	AR-NC5J	STANDARD
10	SCANNER	AR-NS2	DM-NS1
11	FAX	AR-FX4	DM-FX2
12	Handset	AR-HN4	–

*1: Installed quantity is displayed in ( ).

For the cassettes, only the option cassette is displayed.

22-11

Purpose	Adjustment/Setting/Check
Function (Purpose)	FAX related counter display

Operation/procedure

The current counter value (number of send/receive pages) of the FAX send/receive counter and the accumulated reception time and the print counter are displayed.

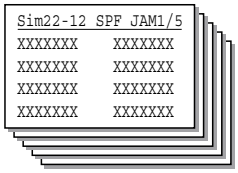
Note: Executable only when the FAX is installed.

22-12

Purpose	Adjustment/setting/operation data output/check (display/print)	
Function (Purpose)	Used to check the misfeed positions and the number of misfeed at each position. (When the number of misfeed is considerably great, it can be judged as necessary for repair.)	
Section	SPF	
Item	Trouble	Mis-feed

Operation/procedure

Fourty SPF JAM history datas are displayed sequentially from the latest.



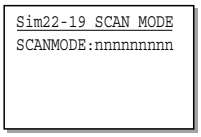
Display items	Jam contents
PI_TOP	SPF paper-in lead edge jam
PI_END	SPF paper-in rear edge jam
PO_TOP	SPF paper-out lead edge jam
PO_END	SPF paper-out rear edge jam
JAM_REV	SPF duplex reversion jam
ORG_SHORT	SPF short scale error
ORG_LONG	SPF long scale error

22-19

Purpose	Adjustment/setting/operation data output/check (display/print)
Function (Purpose)	Used to display the scanner mode counter.
Item	Trouble

Operation/procedure

Counter data is displayed.



SCANMODE	Scanner mode counter

24

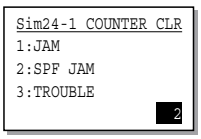
24-1

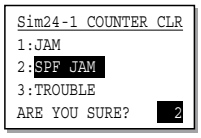
Purpose	Data clear
Function (Purpose)	Used to clear the misfeed counter, the misfeed history, the trouble counter, and the trouble history. (The counters are cleared after completion of maintenance.)
Item	Counter

Operation/procedure (Pattern 7)

Each counter is cleared individually. (The history of each counter is deleted when clearing)

(Initial screen) (Check screen)





1:JAM	JAM counter/JAM history
2:SPF JAM	SPF JAM counter/SPF JAM history
3:TROUBLE	Trouble counter/Trouble history

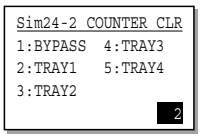
24-2

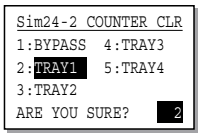
Purpose	Data clear
Function (Purpose)	Used to clear the number of use (the number of prints) of each paper feed section.
Section	Paper feed
Item	Counter

Operation/procedure (Pattern 7)

Clear the counters individually.

(Initial screen) (Check screen)





1:BYPASS	Manual feed counter	4:TRAY3	Tray 3 counter
2:TRAY1	Tray 1 counter	5:TRAY4	Tray 4 counter
3:TRAY2	Tray 2 counter		

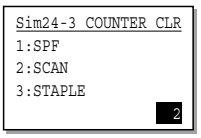
24-3

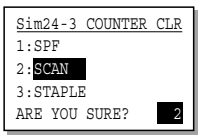
Purpose	Data clear
Function (Purpose)	Used to clear the number data of use of the staple, the SPF and scanning.
Item	Counter

Operation/procedure (Pattern 7)

Clear the counters individually.

(Initial screen) (Check screen)





1:SPF	SPF counter
2:SCAN	Scan counter
3:STAPLE	Stapler counter

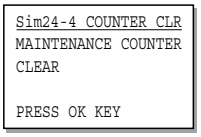
24-4

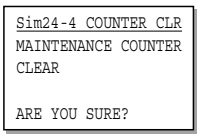
Purpose	Data clear
Function (Purpose)	Used to reset the maintenance counter.
Item	Counter

Operation/procedure (Pattern 6)

Press the [OK] key.

(Initial screen) (Check screen)





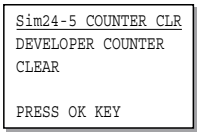
24-5

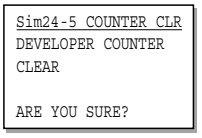
Purpose	Data clear	
Function (Purpose)	Used to reset the developer counter. (The developer counter of the DV unit which is installed is reset.)	
Section	Image process (Photoconductor/Developing/Transfer/Cleaning)	
	Developer/Toner hopper	
Item	Counter	Developer

Operation/procedure (Pattern 6)

Press the [OK] key.

(Initial screen) (Check screen)





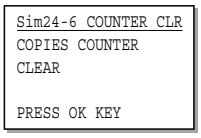
24-6

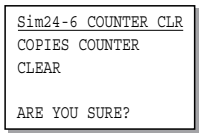
Purpose	Data clear	
Function (Purpose)	Used to reset the copy counter.	
Item	Counter	Copier

Operation/procedure (Pattern 6)

Press the [OK] key.

(Initial screen) (Check screen)





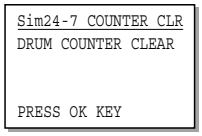
24-7

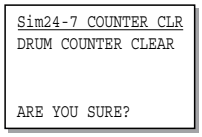
Purpose	Data clear
Function (Purpose)	Used to clear the OPC drum (membrane decrease) correction counter. (This simulation is executed when the OPC drum is replaced.
Section	Image process (Photoconductor/Developing/Transfer/ Cleaning)
	Photo conductor
Item	Counter

Operation/procedure (Pattern 6)

Press the [OK] key.

(Initial screen) (Check screen)





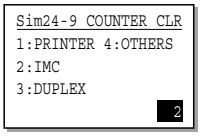
24-9

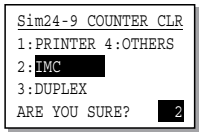
Purpose	Data clear	
Function (Purpose)	Used to clear the printer print counter. (The counter is cleared after completion of maintenance.)	
Section	Printer	
Item	Counter	Printer

Operation/procedure (Pattern 7)

Clear the counters individually.

(Initial screen) (Check screen)





1:PRINTER	Printer counter
2:IMC	IMC counter
3:DUPLEX	DUPLEX counter
4:OTHERS	The other counters

24-10

Purpose	Adjustment/Setting/Check
Function (Purpose)	FAX related counter clear

Operation/procedure

The current counter value (number of send/receive pages) of the FAX send/receive counter and the accumulated reception time and the print counter are cleared to 0.

Note: Executable only when the FAX is installed.

24-15

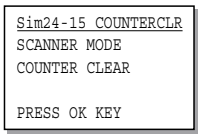
Purpose	Data clear
Function (Purpose)	Used to clear the scanner mode counter.
Item	Counter

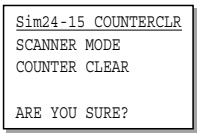
Operation/procedure (Pattern 6)

Press the [OK] key.

The scanner mode counter and the number of send of the scanner are cleared.

(Initial screen) (Process check screen)





25

25-1

Purpose	Operation test/check
Function (Purpose)	Used to check the operation of the main drive (excluding the scanner section) and to check the operation of the toner concentration sensor. (The toner concentration sensor output can be monitored.)
Section	DRIVE
Item	Operation

Operation/procedure

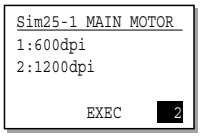
The operation of the drive system is checked.

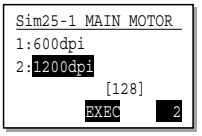
Toner density control sensor value is displayed.

Select the mode with the 10-key and press the [OK] key, and the main motor will rotate and the toner concentration control sensor value will be displayed.

After execution, interruption cannot be made for about 7 sec. ([CA] key, [INTERRUPT] key, and [BACK] key are invalid.)

(Initial screen) (Executing screen)





25-2

Purpose	Setting
Function (Purpose)	Used to make the initial setting of toner concentration when replacing developer.
Section	Image process (Photoconductor/Developing/Transfer/ Cleaning)
	Developer/Toner hopper

Operation/procedure

1) Open the cover.
2) Power ON. (The mechanism cannot be initialized because the cover is open.)
3) Install the developing unit with new developer in it.
4) Enter SIM 25-2.
5) Close the cover immediately before starting the operation.
6) Press the [OK] key to start.

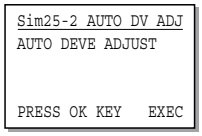
Sampling is made 54 times every 600ms, and the average of the last three times in the last 1.8sec of 3min is stored.

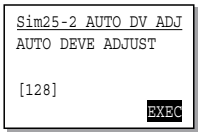
When "EE-EU" or "EE-EL" after completion, an error display is shown.

EU error occurs when the finally calculated toner concentration reference value is 179 or greater.

EL error occurs when the finally calculated toner concentration reference value is 77 or smaller.

(Initial screen) (Executing screen)





Note: After completion of execution, be sure to press the [CA] key to cancel the simulation.

[CRUM-related error cancel procedure]

- When “CRUM DEVICE ERROR” is displayed:
  Error content: Occurs in case of a communication error between the machine and CRUM.
  Cancel procedure: Reset with [CA] key and cancel with SIM 16.
- "CRUM DATA ERROR"
  Error content: CRUM identification error, CRUM model error, CRUM type error, CRUM destination error
  Cancel procedure: Install the CRUM which is satisfactory with the machine setup, reset with the [CA] key, and execute SIM 25-2 again.
- "DEVE UNIT NONE"
  Error content: Occurs when the developing unit is not installed in an AR model.
  Cancel procedure: It returns to the state before execution of auto developer adjustment. It is canceled by the operations of Cover open → Developing unit installation → Cover close. Therefore, developer adjustment is started by pressing [OK] key.
- "TONER UNIT NONE"
  Error content: Occurs when the CRUM is not installed in a DM model.
  Cancel procedure: It returns to the state before execution of auto developer adjustment. It is canceled by the operations of Cover open → CRUM installation → Cover close. Therefore, developer adjustment is started by pressing [OK] key.
- "EU ERROR"
  Error content: Occurs when the toner concentration reference value calculated in developer adjustment finally is 179 or greater.
  Cancel procedure: Reset with [CA] key and execute SIM 25-2 again.
- "EL ERROR"
  Error content: Occurs when the toner concentration reference value calculated in developer adjustment finally is 77 or smaller.
  Cancel procedure: Reset with [CA] key and execute SIM 25-2 again.

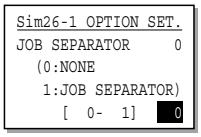
26

26-1

Purpose	Setting	
Function (Purpose)	Used to set options. (This simulation is used to make option setting when an option is installed.)	
Item	Specifications	Option

Operation/procedure (Pattern 1)

Set the job separator.



Set value	Connection option
0	None (default)
1	Job separator provided.

26-2

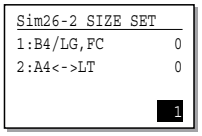
Purpose	Setting
Function (Purpose)	Used to detect the paper size.
Section	Paper feed
Item	Specifications

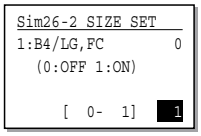
Operation/procedure (Pattern 2)

Used to set the automatic size detection.

1:B4/LG,FC	Setting to detect B4/Legal as FC 0: B4 legal is detected as B4 legal. 1: B4 legal is detected as FC.
2:A4<->LT	This setup detects Letter as A4 in the inch series and A4 as Letter in the AB series. 0: Detection disable 1: Detection valid

(Initial screen) (Input screen)





8.5" x 13" detection valid/invalid setup

Set value	Setup	Remarks
0	Detection invalid	Default
1	Detection valid	

Detection size when 8.5" x 13" document/paper is used.

	Employed unit	Destination	Document size	Set value 0 (Invalid)	Set value 1 (Valid)
Document	Document table/SPF	AB series (Japan)	FC (8.5” x 13”)	B4	B4
			LG (8.5” x 14”)	B4	B4
			B4	B4	B4
		AB series	FC (8.5” x 13”)	B4	FC (8.5” x 13”)
			LG (8.5” x 14”)	B4	FC (8.5” x 13”)
			B4	B4	FC (8.5” x 13”)
		Inch series	FC (8.5” x 13”)	LG (8.5” x 14”)	FC (8.5” x 13”)
			LG (8.5” x 14”)	LG (8.5” x 14”)	FC (8.5” x 13”)
			B4	WLT (11” x 17”)	WLT (11” x 17”)
Paper	Machine paper feed cassette	All destinations	–	Set with key operations.	
	Manual paper feed tray	Japan (AB series)	FC (8.5” x 13”)	LG (8.5” x 14”)	LG (8.5” x 14”)
			LG (8.5” x 14”)	LG (8.5” x 14”)	LG (8.5” x 14”)
			B4	B4	B4
		AB series	FC (8.5” x 13”)	LG (8.5” x 14”)	FC (8.5” x 13”)
			LG (8.5” x 14”)	LG (8.5” x 14”)	FC (8.5” x 13”)
			B4	B4	B4
		Inch series	FC (8.5” x 13”)	LG (8.5” x 14”)	FC (8.5” x 13”)
			LG (8.5” x 14”)	LG (8.5” x 14”)	FC (8.5” x 13”)
			B4	B4	B4

A4/LT (8.5" x 11") detection enable/disable setup

In the inch series, Letter is detected as A4; in the AB series, A4 is detected as Letter.

Set value	Setup	Remarks
0	Detection invalid	Default
1	Detection valid	

Detection size when A4/LT (8.5" x 11") document/paper is used.

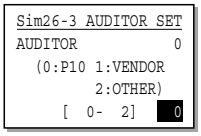
	Employed unit	Destination	Document size	Set value	
				0 (Invalid)	1 (Valid)
Document	Document table/SPF	AB series	A4	A4	LT (8.5" x 11")
			LT (8.5" x 11")	A4	LT (8.5" x 11")
		Inch series	A4	LT (8.5" x 11")	A4
			LT (8.5" x 11")	LT (8.5" x 11")	A4
Paper	Machine paper feed cassette	All destinations	–	Set with key operations.	
	Manual paper feed tray	All destinations	–	Regardless of the simulation setup.	

26-3

Purpose	Setting
Function (Purpose)	Used to set the specifications of the auditor. Setting must be made depending on the use condition of the auditor.
Section	Auditor
Item	Specifications

Operation/procedure (Pattern 1)

Set the auditor.



Display items	Content	Setting range	Default
0:P10	Built-in auditor mode	0-2	0
1:VENDOR	Coin vendor mode		
2:OTHER	Others		

26-5

Purpose	Setting	
Function (Purpose)	Used to set the count mode of the total counter and the maintenance counter.	
Item	Specifications	Counter

Operation/procedure (Pattern 2)

Used to set the count up number (1 or 2) when an A3/WLT paper passes through.

For the drum counter and the developer counter, double count is employed unconditionally.

(Target counter selection)

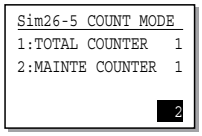
1:TOTAL COUNTER	Total
2:MAINTE COUNTER	Maintenance

Used to set the count up number of the selected counter.

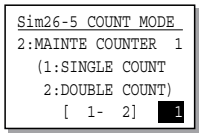
1:SINGLE COUNT	Single count
2:DOUBLE COUNT	Double count

Setting range	1-2
Default	2

(Initial screen)



(Input screen)

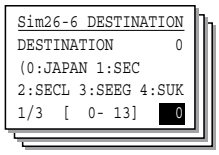


26-6

Purpose	Setting	
Function (Purpose)	Used to set the specifications depending on the destination.	
Item	Specifications	Destination

Operation/procedure (Pattern 1)

Select the destination.



Display items	Content	Setting range	Default
0:JAPAN	Japan	0-13	0
1:SEC	SEC		
2:SECL	SECL		
3:SEEG	SEEG		
4:SUK	SUK		
5:SCA	SCA		
6:SEF	SEF		
7:INEG	EX inch series		
8:ABEG	EX AB series		
9:INEF	EX inch series (FC)		
10:ABEF	EX AB series (FC)		
11:CHINESE	China		
12:TAIPEI	Taiwan		
13:SEEG2	SEEG2		

26-10

Function (Purpose)	Used to enter the Software Key for the Network Scanner. (Setup is allowed only when the PCL board is installed.

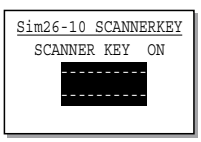
Operation/procedure

The current setup is displayed with ON or OFF.

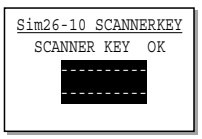
Enter an input (20 digits) of the NETWORK soft key and press the [OK] key, and the collating result is displayed with OK or NG.

When "0" is entered to the soft key, it is treated as a trial setup.

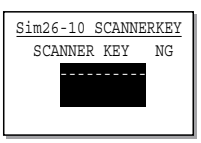
(Initial screen)



(In case of OK)



(In case of NG)



After canceling the simulation, if OK, the scanner function is enable; if NG, the scanner function is disabled.

This setting must be reset after the simulation cancel.

Note: Executable only when the SCANNER is installed.

26-12

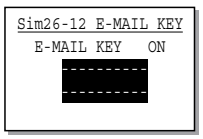
Function (Purpose)	Used to input the Software Key for E-MAIL RIC.

Operation/procedure

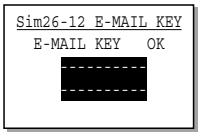
The current setup is displayed with ON or OFF.

Enter an input (20 digits) of the E-MAIL RIC soft key and press the [OK] key, and the collating result is displayed with OK or NG.

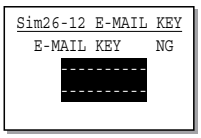
(Initial screen)



(In case of OK)



(In case of NG)



After canceling the simulation, if OK, the E-MAIL RIC function is enable; if NG, the E-MAIL RIC function is disabled.

This setting must be reset after the simulation cancel.

Note: Executable only when the PCL/NIC is installed.

26-14

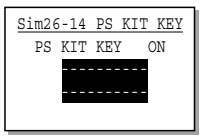
Function (Purpose)	Used to input the Software Key for the PS extention kit.

Operation/procedure

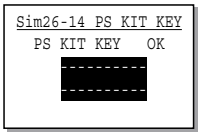
The current setup is displayed with ON or OFF.

Enter an input (20 digits) of the PS expansion kit soft key and press the [OK] key, and the collating result is displayed with OK or NG.

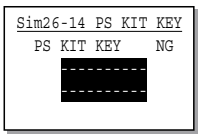
(Initial screen)



(In case of OK)



(In case of NG)



After canceling the simulation, if OK, the PS expansion kit function is enable; if NG, the PS expansion kit function is disabled.

This setting must be reset after the simulation cancel.

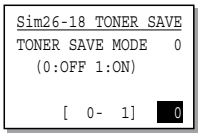
Note: Executable only when the PCL/PS3 is installed.

26-18

Purpose	Setting	
Function (Purpose)	Used to set enable/disable of toner save operation.	
Item	Specifications	Operation mode (Common)

Operation/procedure (Pattern 1)

Input the set value with the 10-key and press the [OK] key.



Display items	Content	Setting range	Default
0:OFF	Disable	0-1	0
1:ON	Enable		

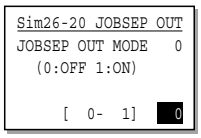
Note	Setup is allowed only for Japan and UK.

26-20

Function (Purpose)	Used to set the job separator paper exit mode.

Operation/procedure (Pattern 1)

Input the set value with the 10-key and press the [OK] key.



Display items	Content	Setting range	Default
0:OFF	Paper is discharged to No. 1 paper exit port.	0-1	0
1:ON	Used to discharge paper to the job separator tray (No. 2 paper exit port).		

Note: Executable only when the finisher is not installed.

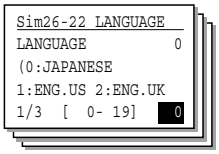
26-22

Purpose	Setting
Function (Purpose)	Used to set the specification (language display) for the destination.
Item	Specifications

Operation/procedure (Pattern 1)

Select the language to be used according to the table below.

This setup varies in connection with SIM 26-6 (Destination setup).



Display items		Setting range	Default
0:JAPANESE	10:TURKISH	0-19	0
1:ENG.US	11:GREEK		
2:ENG.UK	12:POLISH		
3:FRENCH	13:HUNGARIAN		
4:GERMAN	14:CZECHOSLOVAK		
5:ITALY	15:RUSSIAN		
6:DUTCH	16:FINNISH		
7:SWEDISH	17:NORWEGIAN		
8:SPANISH	18:DANISH		
9:PORTUGUESE	19:CHINESE		

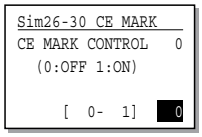
26-30

Purpose	Setting	
Function (Purpose)	Used to set the operation mode for CE mark.	
Item	Specifications	Operation mode (Common)

Operation/procedure (Pattern 1)

Input the set value with the 10-key and press the [OK] key.

This setup varies in connection with SIM 26-6 (Destination setup).



Display items	Setting range	Default	
		Japan, SEC, SECL, SCA, SEF, Taiwan	Others
0:OFF	0-1	0	1
1:ON			

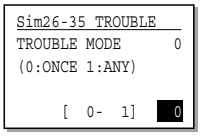
26-35

Purpose	Setup
Function (Purpose)	Used to set the mode of trouble memory.
Item	Specifications

Operation/procedure (Pattern 1)

Used to set whether the trouble history of SIM 22-4 is displayed as one-time trouble or as a number of times of troubles continuously occurred when two or more troubles of the same kind occurred.

Enter the set value with 10-key, and press [OK] key.



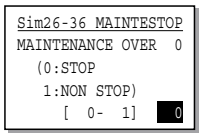
Display item	Content	Set range	Default
0:ONCE	When two or more troubles occur, only one is registered.	0-1	0
1:ANY	All the troubles occurred are registered.		

26-36

Purpose	Setting
Function (Purpose)	Used to set whether to stop when the maintenance life is reached.
Item	Operation

Operation/procedure (Pattern 1)

Input the set value with the 10-key and press the [OK] key.



Display items	Content	Setting range	Default
0:STOP	Stop	0-1	1
1:NON STOP	Non stop		

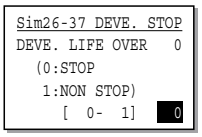
Note: Executable only with SRU (AR models).

26-37

Purpose	Setting
Function (Purpose)	Used to set whether to stop when the developer life is reached.
Item	Operation

Operation/procedure (Pattern 1)

Input the set value with the 10-key and press the [OK] key.



Display items	Content	Setting range	Default
0:STOP	Stop	0-1	0
1:NON STOP	Non stop		

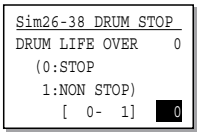
Note: Executable only with CRU (DM models).

26-38

Purpose	Setting
Function (Purpose)	Used to set whether to stop when the drum life is reached.
Item	Operation

Operation/procedure (Pattern 1)

Input the set value with the 10-key and press the [OK] key.



Display items	Content	Setting range	Default
0:STOP	Stop	0-1	0
1:NON STOP	Non stop		

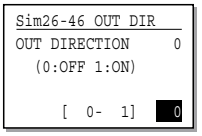
Note: Executable only with CRU (DM models).

26-46

Purpose	Setting
Function (Purpose)	Used to set whether to meet with the output direction of images regardless of the mode when installing the finisher.
Item	Operation

Operation/procedure (Pattern 1)

Input the set value with the 10-key and press the [OK] key.



Display items	Content	Setting range	Default
0:OFF	Setting No	0-1	0
1:ON	Setting Yes		

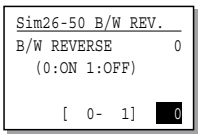
Note: Executable only when the finisher is installed.

26-50

Purpose	Setting
Function (Purpose)	Used to set whether to use the black/white reverse function.
Item	Operation

Operation/procedure (Pattern 1)

Input the set value with the 10-key and press the [OK] key.



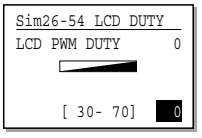
Display items	Content	Setting range	Default
0:ON	Enable	0-1	0
1:OFF	Disable		

26-54

Purpose	Setting
Function (Purpose)	Used to set the PWM duty (brightness) at the center value of the LCD contrast.
Item	Operation

Operation/procedure (Pattern 1)

Input the set value with the 10-key and press the [OK] key, and the LCD contrast will be immediately changed and displayed.



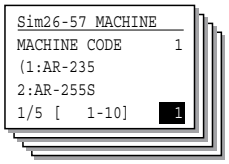
Setting range	30-70
Default	50

26-57

Purpose	Setting
Function (Purpose)	Used to set the model code.
Item	Operation

Operation/procedure (Pattern 1)

Input the set value with the 10-key and press the [OK] key.



Display items	Setting range	Default
1:AR-235	1-10	1
2:AR-255S		
3:AR-255P		
4:AR-255F		
5:AR-255FP		
6:AR-275		
7:AR-N275		
8:DM-2305		
9:DM-2515		
10:DM-2705		

If a model different from CPM setup (22cpm or 27cpm) of BOOT is set, a system error will occur after canceling the simulation.

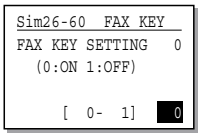
26-60

Purpose	Setting
Function (Purpose)	Used to set enable/disable of the FAX mode key when FAX is not installed. (When FAX is installed, the FAX mode is enabled regardless of this setup.)
Item	Operation

Operation/procedure (Pattern 1)

Input the set value with the 10-key and press the [OK] key.

This setup varies in connection with SIM 26-6 (Destination setup).



Display items	Content	Setting range	Default	
			JAPAN, SEC, SECL, SUK, SCA	Others
0:ON	Effective (The message with FAX uninstalled is displayed.)	0-1	0	1
1:OFF	Disable (Error Beep)			

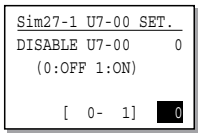
27

27-1

Purpose	Setting	
Function (Purpose)	Used to set PC/MODEM communication trouble (U7-00) detection Yes/No.	
Section	Communication (RIC/MODEM)	
Item	Specifications	Operation mode (Common)

Operation/procedure (Pattern 1)

Input the set value with the 10-key and press the [OK] key.



Display items	Content	Setting range	Default
0:OFF	In case of the communication trouble, U7-00 is not displayed.	0-1	0
1:ON	In case of the communication trouble, U7-00 is displayed.		

27-5

Purpose	Setting
Function (Purpose)	Used to enter the TAG No. of the copier.
Item	Data

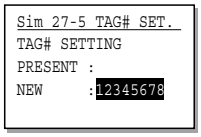
Operation/procedure

Current memory is displayed in PRESENT column.

Enter a value (max. 8 digits) with the 10-key, and press the [OK] key.

The input number is displayed instead of "NEW".

The set value is stored and "PRESENT" of LCD is revised.



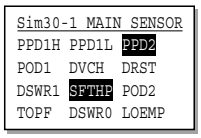
30

30-1

Purpose	Operation test/check
Function (Purpose)	Used to check the operation of sensors and detectors in the sections other than the paper feed section of the copier and the related circuit. (The operation of sensors and detectors can be monitored with the LCD.)
Section	Others
Item	Operation

Operation/procedure

The operating conditions of sensors and detectors in the different sections than the paper feed section of the machine are displayed. The active sensors and detectors are highlighted.



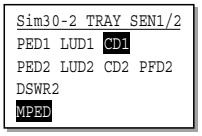
PPD1H	PS paper detection 1 sensor
PPD1L	PS paper detection 2 sensor
PPD2	Duplex sensor
POD1	1st paper exit paper out sensor
DVCH	Developing cartridge detection sensor
DRST	Drum intial detection sensor
DSWR1	Interlock switch (side door)
SFTHP	Shifter home position sensor
POD2	2nd paper exit paper out sensor
TOPF	2nd paper exit full detection sensor
DSWR0	2nd paper exit cover open/close detection sensor
LOEMP	1st paper exit empty detection sensor

30-2

Purpose	Operation test/check
Function (Purpose)	Used to check the operation of sensors and detectors in the paper feed section and the related circuits. (The operations of sensors and detectors in the paper feed section can be monitored with the LCD.)
Section	Paper feed
Item	Operation

Operation/procedure

The operating conditions of sensors and detectors in the paper feed section of the machine are displayed. The active sensors and detectors are highlighted.



PED1	1st cassette paper empty sensor
LUD1	1st cassette paper upper limit detection sensor
CD1	1st cassette empty sensor
PED2	2nd cassette paper empty sensor
LUD2	2nd cassette paper upper limit detection sensor
CD2	2nd cassette empty sensor
PFD2	2nd cassette paper pass sensor
DSWR2	2nd cassette right door detection sensor
MPED	Manual tray paper empty detection
MPLS1	Manual tray length detection 1
MPLS2	Manual tray length detection 2
MPLD1	Manual feed paper length detection 1
MPLD2	Manual feed paper length detection 2

Width detection size of the manual feed tray (one of them is displayed.)
A4/A3, LT/WLT, B5/B4, INV/LTR, A5/A4R, B5R, POSTCARD, EXTRA
(At detection, highlighted)

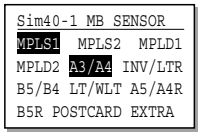
40

40-1

Purpose	Operation test/check
Function (Purpose)	Used to check the operation of the manual paper feed tray paper size detector and the related circuit. (The operation of the manual paper feed tray paper size detector can be monitored with the LCD.)
Section	Paper feed
Item	Operation

Operation/procedure

The status of sensors and detectors in the manual paper feed section is displayed. The active sensors and detectors are highlighted.



MPLS1	Manual tray length detection 1	MPLD1	Manual feed paper length detection 1
MPLS2	Manual tray length detection 2	MPLD2	Manual feed paper length detection 2

Width detection size of the manual feed tray (one of them is displayed.)
A4/A3, LT/WLT, B5/B4, INV/LTR, A5/A4R, B5R, POSTCARD, EXTRA

40-2

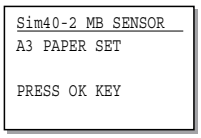
Purpose	Adjustment
Function (Purpose)	Used to adjust the manual paper feed tray paper width detector detection level.
Section	Paper feed
Item	Operation

Operation/procedure

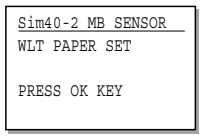
1) Set A3/W Letter and fit the guide, then press the [OK] key.
2) Set A4R/LetterR and fit the guide, then press the [OK] key.
   When the intermediate position adjustment is not performed, press the [OK] key without changing the guide position.
3) Set to A5R/INVOICE R and fit the guide, then press the [OK] key.
   When the intermediate position adjustment is not performed, press the [OK] key without changing the guide position.
4) Narrow the guide at minimum, press the [OK] key.
5) Set the paper detection width (+), and press the [OK] key.
6) Set the paper detection width (–), and press the [OK] key.

If "FAILED" is displayed in procedure 1), 2), 3), or 4), it is NG of adjustment. Repeat the adjustment.

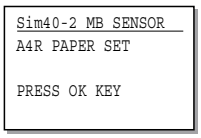
(Maximum position setting screen: AB series)



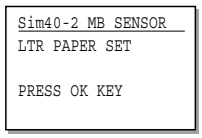
(Maximum position setting screen: Inch series)



(Intermediate position L setting screen: AB series)

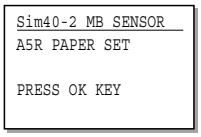


(Intermediate position L setting screen: INCH series)

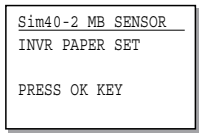


If the intermediate position adjustment is not performed, press the [OK] key without changing the guide position.

(Intermediate position S setting screen: AB series)

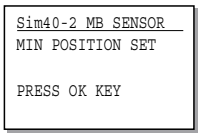


(Intermediate position S setting screen: INCH series)

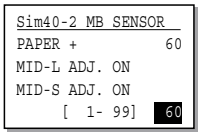


If the intermediate position adjustment is not performed, press the [OK] key without changing the guide position.

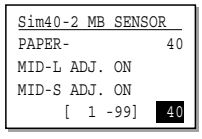
(Minimum position setting screen)



(Paper width detection (+) setting screen)

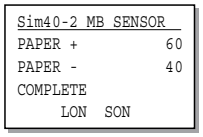


(Paper width detection (–) setting screen)



The intermediate position adjustment setup YES/NO is displayed.

(Adjustment result screen)



Adjustmen state is displayed.

Paper width detection (+) adjustment value

Paper width detection (–) adjustment value

Intermediate position L YES : LON

Intermediate position L NO : LOFF

Intermediate position S YES : SON

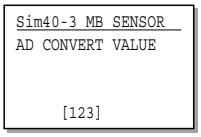
Intermediate position S NO : SOFF

40-3

Purpose	Adjustment
Function (Purpose)	The AD conversion value of manual feed width detection is displayed.
Section	Paper feed
Item	Operation

Operation/procedure

The AD conversion value of manual feed width detection is displayed.



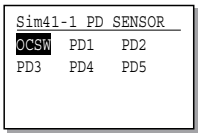
41

41-1

Purpose	Operation test/check
Function (Purpose)	Used to check the document size detection photo sensor.
Section	Others
Item	Operation

Operation/procedure

The operation status of the sensors and detectors in the original size detection section are displayed. The active sensors and detectors are highlighted.



OCSW	Original cover state Open: Highlighted display Close: Normal display	PD1 to 5	Original sensor status Without original: Normal display With original: Highlighted display

For AB series, PD1 - 5 is displayed, for inch series, PD1 - 4.

41-2

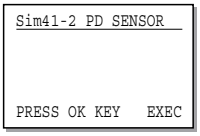
Purpose	Adjustment
Function (Purpose)	Used to adjust the detection level of the document size photo sensor.
Section	Others
Item	Operation

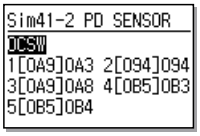
Operation/procedure

Place an A3 (or WLT) document on the document table, and press [OK] key with the OC cover open.

The adjustment is performed and the result is displayed.

(Initial screen) (Executing screen)





OCSW	Original cover state Open: Highlighted display Close: Normal display	1 to 5	PD sensor detection level

The value in [ ] shows the threshold value.

For AB series, 1 - 5 is displayed, for inch series, 1 - 4.

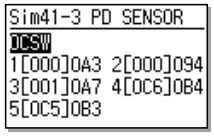
During execution, [EXEC] is highlighted.

41-3

Purpose	Operation test/check
Function (Purpose)	Used to check the light reception level and the detection level of the original size detection photo sensor.
Section	Others
Item	Operation

Operation/procedure

The detection output level of each sensor is displayed in real time.



OCSW	Original cover state Open: Highlighted display Close: Normal display	1 to 5	PD sensor detection level

The value in [ ] shows the threshold value of 20 degree detection adjustment.

For AB series, 1 - 5 is displayed, for inch series, PD1 - 4.

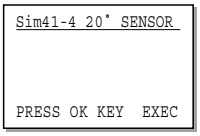
41-4

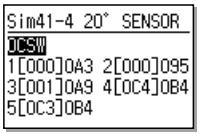
Purpose	Adjustment
Function (Purpose)	Used to adjust the detection level of OC 20 degrees.
Section	Others
Item	Operation

Operation/procedure

Set the OC cover at 20 degrees detection and press the [OK] key.

(Initial screen) (Executing screen)





The detection output level of each sensor is displayed in real time.

OCSW	Original cover state Open: Highlighted display Close: Normal display	1 to 5	PD sensor detection level

The value in [ ] shows the threshold value of 20 degree detection adjustment.

For AB series, 1 - 5 is displayed, for inch series, 1 - 4.

During execution, [EXEC] is highlighted.

43

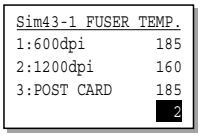
43-1

Purpose	Setting
Function (Purpose)	Used to set the fusing temperature in each operation mode.
Section	Fixing (Fusing)
Item	Operation

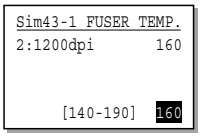
Operation/procedure (Pattern 2)

After the mode selection, enter the adjustment value and press the [OK] key.

(Initial screen)



(Input screen)



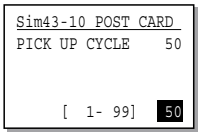
Display items	Content	Setting range	Default
1:600dpi	600dpi	155-190	185
2:1200dpi	1200dpi	140-190	160
3:POST CARD	Postcard	155-190	185

43-10

Purpose	Setting
Function (Purpose)	Used to set the paper feed cycle for postcard.
Section	Paper feed
Item	Operation

Operation/procedure (Pattern 1)

Input the set value with the 10-key and press the [OK] key.



Setting range	1-99
Default	50

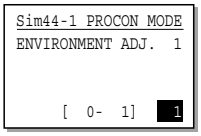
44

44-1

Purpose	Setting
Function (Purpose)	Used to make various setups in each mode of process control.
Section	Image process (Photoconductor/Developing/Transfer/ Cleaning)
Item	Operation

Operation/procedure (Pattern 1)

Enter the adjustment value with the 10-key and press the [OK] key, and the entered value is registered.



Display items	Content	Setting range	Default
ENVIRONMENT ADJ.	Environmental correction Valid/Invalid (0: Environmental correction invalid 1: Environmental correction valid)	0-1	1

44-34

Purpose	Adjustment
Function (Purpose)	Used to adjust the transfer current value.

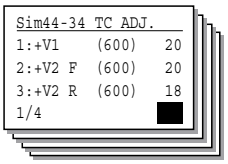
Operation/procedure

To support an individual necessity in paper and the environment, it is variable in the range of 5 to 30uA in the increment of 1uA in each mode.

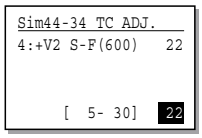
When changing +V2, check with +V1 unchanged. If there is any trouble in the half tone image of graphics, keep the relationship between +V1 and +V2 at the default and change it.

When the image quality is deteriorated because the user selects the OHP mode and use other than the recommended OHP, decrease the transfer current to adjust deterioration of black background picture quality. If some of characters are not printed, increase the transfer current.

(Initial screen)



(Input/Executing screen)



Display items	Content	Setting range	Default	
			Japan, USA	Others
1:+V1 (600)	600dpi +V1	5-30	18	20
2:+V2 F (600)	600dpi +V2 front surface	5-30	18	20
3:+V2 R (600)	600dpi +V2 back surface	5-30	16	16
4:+V2 S-F(600)	600dpi +V2 small size front	5-30	24	24
5:+V2 S-R(600)	600dpi +V2 small size back	5-30	18	18
6:+V2 OHP(600)	600dpi +V2OHP	5-30	20	20
7:+V1 (1200)	1200dpi +V1	5-30	8	8
8:+V2 F (1200)	1200dpi +V2 front surface	5-30	12	14
9:+V2 R (1200)	1200dpi +V2 back surface	5-30	8	8
10:+V2 S-F(1200)	1200dpi +V2 small size front	5-30	14	14
11:+V2 S-R(1200)	1200dpi +V2 small size back	5-30	12	12
12:+V2 OHP(1200)	1200dpi +V2OHP	5-30	10	10

44-35

Purpose	Setting
Function (Purpose)	Correction temperature setup when correcting the ambient temperature.

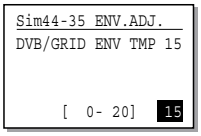
Operation/procedure

Correction is performed when the temperature sensor installed to the MCU indicates 15°C or below.

The content of correction is to raise the DVB-Bias and Grid by –50V.

The simulation allows to vary the correction threshold value in the range of 0 to 20°C.

If, however, the set temperature is increased, correction at a high voltage is performed in normal temperatures.



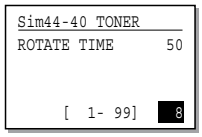
Setting range	0-20
Default	15°C

44-40

Purpose	Setting
Function (Purpose)	Used to set the rotating time before toner supply.

Operation/procedure (Pattern 1)

Enter the set value with the 10-key, and the set value will be registered.



Setting range	1-99
Default	8

46

46-2

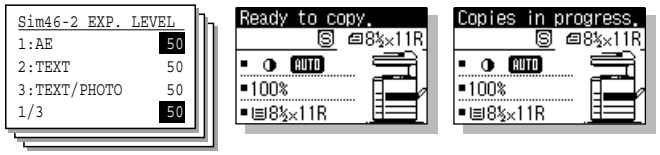
Purpose	Adjustment	
Function (Purpose)	Used to adjust the copy exposure level.	
Item	Picture quality	Density

Operation/procedure (Pattern 5)

Select the mode with the arrow keys, enter the adjustment value with the 10-key, and press the [OK] key.

When the [START] key is pressed, a print is made and the display returns to the mode selection menu.

(Initial screen) (Input screen) (Executing screen)



(Auto adjustment)

Display items	Content		Setting range	Default
1:AE	AE		1-99	50
2:TEXT	Character	Level 3.0		
3:TEXT/PHOTO	Character/Photo	Level 3.0		
4:PHOTO	Photo	Level 3.0		
5:SUPER PHOTO	Super photo	Level 3.0		
6:AE(TS)	AE (TS)			
7:TEXT(TS)	Character (TS)	Level 3.0		
8:TEXT/PHOTO(TS)	Character/Photo (TS)	Level 3.0		

Setup of various copy conditions: Similar to the normal copy mode.

Use of [SPECIAL FUNCTION] key, [JOB STATUS] key, and [INTERRUPT] key is inhibited.

46-7

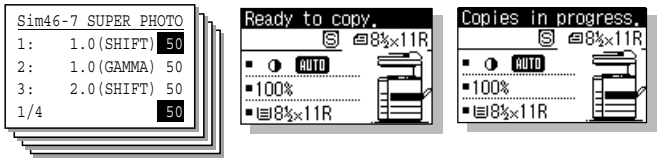
Purpose	Adjustment	
Function (Purpose)	Used to adjust individually the copy exposure level. (Super photo)	
Item	Picture quality	Density

Operation/procedure (Pattern 5)

Select the mode with the arrow keys, enter the adjustment value with the 10-key, and press the [OK] key.

When the [START] key is pressed, a print is made and the display returns to the mode selection menu.

(Initial screen) (Input screen) (Executing screen)



Display items	Content	Setting range	Default
1:1.0(SHIFT)	Super photo level 1.0 (shift q'ty)	1-99	32
2:1.0(GAMMA)	Super photo level 1.0 (slant)	1-99	50
3:2.0(SHIFT)	Super photo level 2.0 (shift q'ty)	1-99	41
4:2.0(GAMMA)	Super photo level 2.0 (slant)	1-99	50
5:3.0(SHIFT)	Super photo level 3.0 (shift q'ty)	1-99	50
6:3.0(GAMMA)	Super photo level 3.0 (slant)	1-99	50
7:4.0(SHIFT)	Super photo level 4.0 (shift q'ty)	1-99	56
8:4.0(GAMMA)	Super photo level 4.0 (slant)	1-99	61
9:5.0(SHIFT)	Super photo level 5.0 (shift q'ty)	1-99	62
10:5.0(GAMMA)	Super photo level 5.0 (slant)	1-99	66

Setup of various copy conditions: Similar to the normal copy mode.

Use of [SPECIAL FUNCTION] key, [JOB STATUS] key, and [INTERRUPT] key is inhibited.

46-9

Purpose	Adjustment	
Function (Purpose)	Used to adjust individually the copy exposure level. (Character)	
Item	Picture quality	Density

Operation/procedure (Pattern 5)

Select the mode with the arrow keys, enter the adjustment value with the 10-key, and press the [OK] key.

When the [START] key is pressed, a print is made and the display returns to the mode selection menu.

(Initial screen) (Input screen) (Executing screen)

Display items	Content	Setting range	Default
1:1.0(SHIFT)	Character level 1.0 (shift q'ty)	1-99	22
2:1.0(GAMMA)	Character level 1.0 (slant)	1-99	44
3:2.0(SHIFT)	Character level 2.0 (shift q'ty)	1-99	36
4:2.0(GAMMA)	Character level 2.0 (slant)	1-99	47
5:3.0(SHIFT)	Character level 3.0 (shift q'ty)	1-99	50
6:3.0(GAMMA)	Character level 3.0 (slant)	1-99	50
7:4.0(SHIFT)	Character level 4.0 (shift q'ty)	1-99	61
8:4.0(GAMMA)	Character level 4.0 (slant)	1-99	55
9:5.0(SHIFT)	Character level 5.0 (shift q'ty)	1-99	72
10:5.0(GAMMA)	Character level 5.0 (slant)	1-99	60
11:TS 1.0(SHIFT)	Character (TS) level 1.0 (shift q'ty)	1-99	22
12:TS 1.0(GAMMA)	Character (TS) level 1.0 (slant)	1-99	44
13:TS 2.0(SHIFT)	Character (TS) level 2.0 (shift q'ty)	1-99	36
14:TS 2.0(GAMMA)	Character (TS) level 2.0 (slant)	1-99	47

Display items	Content	Setting range	Default
15:TS 3.0(SHIFT)	Character (TS) level 3.0 (shift q'ty)	1-99	50
16:TS 3.0(GAMMA)	Character (TS) level 3.0 (slant)	1-99	50
17:TS 4.0(SHIFT)	Character (TS) level 4.0 (shift q'ty)	1-99	61
18:TS 4.0(GAMMA)	Character (TS) level 4.0 (slant)	1-99	55
19:TS 5.0(SHIFT)	Character (TS) level 5.0 (shift q'ty)	1-99	72
20:TS 5.0(GAMMA)	Character (TS) level 5.0 (slant)	1-99	60

Setup of various copy conditions: Similar to the normal copy mode.

Use of [SPECIAL FUNCTION] key, [JOB STATUS] key, and [INTERRUPT] key is inhibited.

46-10

Purpose	Adjustment
Function (Purpose)	Used to adjust individually the copy exposure level. (Character/Photo)
Item	Picture quality

Operation/procedure (Pattern 5)

Select the mode with the arrow keys, enter the adjustment value with the 10-key, and press the [OK] key.

When the [START] key is pressed, a print is made and the display returns to the mode selection menu.

(Initial screen) (Input screen) (Executing screen)

Display items	Content	Setting range	Default
1:1.0(SHIFT)	Character/Photo level 1.0 (shift q'ty)	1-99	30
2:1.0(GAMMA)	Character/Photo level 1.0 (slant)	1-99	37
3:2.0(SHIFT)	Character/Photo level 2.0 (shift q'ty)	1-99	40
4:2.0(GAMMA)	Character/Photo level 2.0 (slant)	1-99	43
5:3.0(SHIFT)	Character/Photo level 3.0 (shift q'ty)	1-99	50
6:3.0(GAMMA)	Character/Photo level 3.0 (slant)	1-99	50
7:4.0(SHIFT)	Character/Photo level 4.0 (shift q'ty)	1-99	57
8:4.0(GAMMA)	Character/Photo level 4.0 (slant)	1-99	61
9:5.0(SHIFT)	Character/Photo level 5.0 (shift q'ty)	1-99	64
10:5.0(GAMMA)	Character/Photo level 5.0 (slant)	1-99	66
11:TS 1.0(SHIFT)	Character/Photo (TS) level 1.0 (shift q'ty)	1-99	30
12:TS 1.0(GAMMA)	Character/Photo (TS) level 1.0 (slant)	1-99	37
13:TS 2.0(SHIFT)	Character/Photo (TS) level 2.0 (shift q'ty)	1-99	40
14:TS 2.0(GAMMA)	Character/Photo (TS) level 2.0 (slant)	1-99	43
15:TS 3.0(SHIFT)	Character/Photo (TS) level 3.0 (shift q'ty)	1-99	50
16:TS 3.0(GAMMA)	Character/Photo (TS) level 3.0 (slant)	1-99	50
17:TS 4.0(SHIFT)	Character/Photo (TS) level 4.0 (shift q'ty)	1-99	57
18:TS 4.0(GAMMA)	Character/Photo (TS) level 4.0 (slant)	1-99	61
19:TS 5.0(SHIFT)	Character/Photo (TS) level 5.0 (shift q'ty)	1-99	64
20:TS 5.0(GAMMA)	Character/Photo (TS) level 5.0 (slant)	1-99	66

Setup of various copy conditions: Similar to the normal copy mode.

Use of [SPECIAL FUNCTION] key, [JOB STATUS] key, and [INTERRUPT] key is inhibited.

46-11

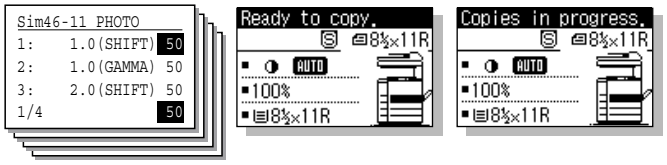
Purpose	Adjustment	
Function (Purpose)	Used to adjust individually the copy exposure level. (Photo)	
Item	Picture quality	Density

Operation/procedure (Pattern 5)

Select the mode with the arrow keys, enter the adjustment value with the 10-key, and press the [OK] key.

When the [START] key is pressed, a print is made and the display returns to the mode selection menu.

(Initial screen) (Input screen) (Executing screen)



Display items	Content	Setting range	Default
1:1.0(SHIFT)	Photo level 1.0 (shift q'ty)	1-99	32
2:1.0(GAMMA)	Photo level 1.0 (slant)		50
3:2.0(SHIFT)	Photo level 2.0 (shift q'ty)		41
4:2.0(GAMMA)	Photo level 2.0 (slant)		50
5:3.0(SHIFT)	Photo level 3.0 (shift q'ty)		50
6:3.0(GAMMA)	Photo level 3.0 (slant)		50
7:4.0(SHIFT)	Photo level 4.0 (shift q'ty)		56
8:4.0(GAMMA)	Photo level 4.0 (slant)		61
9:5.0(SHIFT)	Photo level 5.0 (shift q'ty)		62
10:5.0(GAMMA)	Photo level 5.0 (slant)		66

Setup of various copy conditions: Similar to the normal copy mode.

Use of [SPECIAL FUNCTION] key, [JOB STATUS] key, and [INTERRUPT] key is inhibited.

46-12

Purpose	Adjustment
Function (Purpose)	FAX exposure level adjustment (batch)

Operation/procedure

Shading is performed to turn on the copy LED.

The current exposure value of "Normal character, Auto exposure" mode is displayed.

Enter an adjustment value of 2 digits with the 10-key and press the START key, and the entered value will be set to all the modes and the self print will be made in the normal size.

Exposure adjustment value table

Mode	AE	Photo	Exposure adjustment
STD (Standard character)	Auto	ON	–
	Manual		
	Auto	OFF	Individual adjustment enable (46-13 to 16)
	Manual		
Fine (Small character)	Auto	ON	
	Manual		
	Auto	OFF	
	Manual		
S-fine (Fine)	Auto	ON	
	Manual		
	Auto	OFF	
	Manual		
U-fine (Super fine)	Auto	ON	
	Manual		
	Auto	OFF	
	Manual		

When initializing each data: 50

Note: Executable only when the FAX is installed.

46-13 to 16

Purpose	Adjustment
Function (Purpose)	FAX exposure level adjustment (individual)

Operation/procedure

The FAX exposure level can be adjusted separately for each mode by specifying a sub code. Since selection of Auto/Manual and Photo ON/OFF is allowed separately for each mode, adjustments of 14 patterns in total can be made.

(Refer to 46-12, "Exposure adjustment table".)

Sub code	Mode
13	STD (normal character)
14	Fine (small character)
15	S-fine (super fine)
16	U-fine (super fine)

Shading is performed to turn on the copy LED.

The current exposure value of the selected mode is displayed.

Enter the 2-digit adjustment value with the 10-key pad and push START key. The entered value is set for the specified mode, and the self print is made with the same magnification ratio for the mode.

Note: Executable only when the FAX is installed.

46-18

Purpose	Adjustment
Function (Purpose)	Used to adjust the copy contrast. (Inclination)
Item	Picture quality

Operation/procedure (Pattern 5)

Select the mode with the arrow keys, enter the adjustment value with the 10-key, and press the [OK] key.

When the [START] key is pressed, a print is made and the display returns to the mode selection menu.

(Initial screen) (Input screen) (Executing screen)

(Auto adjustment)

Display items	Content		Setting range	Default
1:AE	AE		1-99	50
2:TEXT	Character	Level 3.0		
3:TEXT/PHOTO	Character/Photo	Level 3.0		
4:PHOTO	Photo	Level 3.0		
5:SUPER PHOTO	Super photo	Level 3.0		
6:AE(TS)	AE(TS)			
7:TEXT(TS)	Character (TS)	Level 3.0		
8:TEXT/PHOTO(TS)	Character/Photo (TS)	Level 3.0		

Setup of various copy conditions: Similar to the normal copy mode.

Use of [SPECIAL FUNCTION] key, [JOB STATUS] key, and [INTERRUPT] key is inhibited.

46-19

Purpose	Adjustment
Function (Purpose)	Used to change the image quality in the exposure mode.
Item	Picture quality

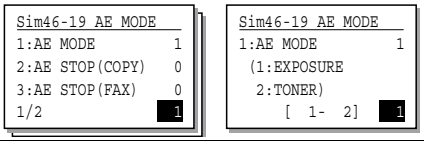
Operation/procedure (Pattern 2)

Select the mode with the 10-key and press the [OK] key.
Enter the adjustment value with the 10-key and press the [OK] key, and the entered value is registered.
Pressing the [BACK] key returns to the mode selection.

Auto exposure mode

- When SIM 26-6 (Destination setup) is changed from EX to Japan, the setup value becomes 1 (Default: Japan). If, on the contrary, it is changed from Japan to EX, the set value becomes 2 (Default: EX)
- If the auto exposure mode setup value is changed, the setup value of SIM 46-30 (AE limit setup) is reset to the default value.

(Initial screen) (Input screen)



Display items	Content	Default
1:AE MODE (1:EXPOSURE 2:TONER)	Auto exposure mode (1: Priority on Image quality, 2: Priority on toner consumption)	2
2:AE STOP(COPY) (0:FIXED 1:REAL TIME)	Auto exposure STOP mode (COPY) (0: Fixed, 1: Real-time)	0
3:AE STOP(FAX) (0:FIXED 1:REAL TIME)	Auto exposure STOP mode (FAX) (0: Fixed, 1: Real-time)	0
4:AE STOP(SCAN) (0:FIXED 1:REAL TIME)	Auto exposure STOP mode (SCANNER) (0: Fixed, 1: Real-time)	0
5:1200dpi PHOTO (1:SOFT 2:HARD)	1200dpi photo mode (Countermeasures for claims on dither) (1: Soft mode, 2: Hard mode)	1

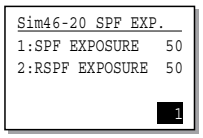
46-20

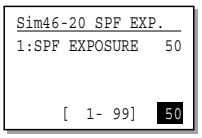
Purpose	Adjustment
Function (Purpose)	Used to correct SPF exprosure.
Item	Picture quality

Operation/procedure (Pattern 2)

Select the mode with the 10-key and press the [OK] key.
Enter the adjustment value with the 10-key and press the [OK] key, and the entered value is registered.
Pressing the [BACK] key returns to the mode selection.

(Initial screen) (Input screen)





Display items	Content	Setting range	Default
1:SPF EXPOSURE	SPF	1-99	50
2:RSPF EXPOSURE	RSPF		

46-30

Purpose	Setting
Function (Purpose)	Used to set the AE limit.

Operation/procedure (Pattern 2)

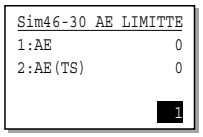
Select the mode with the 10-key and press the [OK] key.

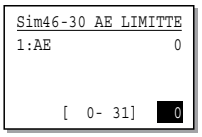
Enter the adjustment value with the 10-key and press the [OK] key, and the entered value is registered.

Pressing the [BACK] key returns to the mode selection.

If SIM 26-6 (Destination setup) and SIM46-19 (Auto exposure mode) are changed, this setup is also changed to the default value accordingly.

(Initial screen) (Input screen)





Display items	Setting range	Default
1:AE	0-31	0
2:AE(TS)		

48

48-1

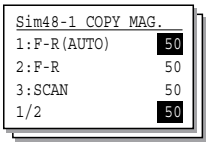
Purpose	Adjustment
Function (Purpose)	Used to adjust the copy mode magnification ratio (main scanning direction, sub scanning direction).
Section	Image processing
Item	Picture quality

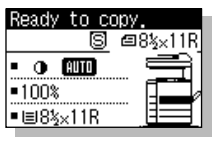
Operation/procedure (Pattern 5)

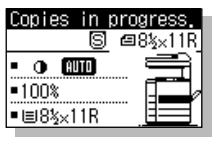
Select the mode with the arrow keys, enter the adjustment value with the 10-key, and press the [OK] key.

When the [START] key is pressed, a print is made and the display returns to the mode selection menu.

(Initial screen) (Input screen) (Executing screen)







Display items	Content	Setting range	Default
1:F-R(AUTO)	Main scanning magnification ratio adjustment (auto)	–	–
2:F-R	Main scanning magnification ratio adjustment	1-99	50
3:SCAN	Sub scanning magnification ratio adjustment		60
4:SPF(SIDE1)	SPF surface sub scan magnification ratio		50
5:SPF(SIDE2)	SPF back surface sub scan magnification ratio		
6:DUPLEX	DUPLEX sub scanning magnification ratio adjustment		

Setup of various copy conditions: Similar to the normal copy mode.

Use of [SPECIAL FUNCTION] key, [JOB STATUS] key, and [INTERRUPT] key is inhibited.

48-2

Purpose	Adjustment
Function (Purpose)	Used to adjust the scanner mode magnification ratio (main/sub scanning direction).
Section	Image processing
Item	Picture quality

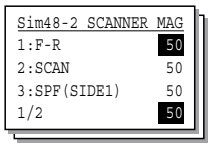
Operation/procedure (Pattern 5)

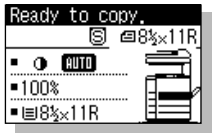
Select the mode with the arrow keys, enter the adjustment value with the 10-key, and press the [OK] key.

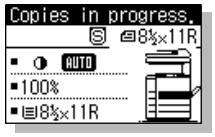
When the [START] key is pressed, a print is made and the display returns to the mode selection menu.

Input the offset for the copy adjustment.

(Initial screen) (Input screen) (Executing screen)







Display items	Content	Setting range	Default
1:F-R	Main scanning magnification ratio adjustment	1-99	50
2:SCAN	Sub scanning magnification ratio adjustment		
3:SPF(SIDE1)	SPF surface sub scan magnification ratio		
4:SPF(SIDE2)	SPF back surface sub scan magnification ratio		

Setup of various copy conditions: Similar to the normal copy mode.

Use of [SPECIAL FUNCTION] key, [JOB STATUS] key, and [INTERRUPT] key is inhibited.

48-3

Purpose	Adjustment
Function (Purpose)	Used to adjust the lead edge/sub scan magnification ratio automatically.
Item	Operation

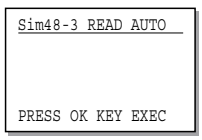
Open the OC cover, and put the lead edge/sub scan automatic adjustment chart on the OC. (Keep the OC cover open.)

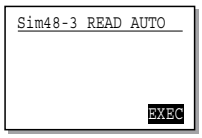
Place the chart correctly on the OC reference position. (If not, a correct adjustment cannot be made.)

If the adjustment is normally completed, the adjusted value is displayed and written into the EEPROM. In case of an abnormality, "ERR" is displayed and the value is not written into the EEPROM.

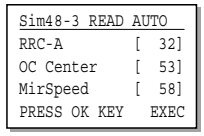
If no adjustment is made because of an abnormality, "---" is displayed.

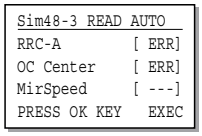
(Initial screen) (Execution screen)





(Normal end screen) (Abnormal end screen)





48-8

Purpose	Adjustment
Function (Purpose)	FAX magnification ratio adjustment (read)
Related soft SW	SW76-1 to 8, SW77-1 to 8

Operation/procedure

Adjust and set FAX document read magnification ratio, read and print the document.

Adjustment magnification ratio	Adjustment range	Adjustment unit
OC read main scanning magnification ratio	1 – 128 – 255%	0.1% increment
OC read sub scanning magnification ratio		
SPF read main scanning magnification ratio		
SPF read sub scanning magnification ratio		

Note: Executable only when the FAX is installed.

48-9

Purpose	Adjustment
Function (Purpose)	FAX magnification ratio adjustment (print)
Related soft SW	SW78-1 to 8, SW79-1 to 8

Operation/procedure

After the adjustment/setting of FAX print magnification ratio, read and print the document.

Adjustment magnification ratio	Adjustment range	Adjustment unit
Main scanning magnification ratio	1 – 128 – 255%	0.1% increment
Sub scanning magnification ratio		

Note: Executable only when the FAX is installed.

48-10

Purpose	Adjustment
Function (Purpose)	FAX auto reduction magnification ratio (print).
Related soft SW	SW25-1 to 4

Operation/procedure

Set the FAX auto reduction magnification ratio (0 to 15%).

Note: Executable only when the FAX is installed.

50

50-1

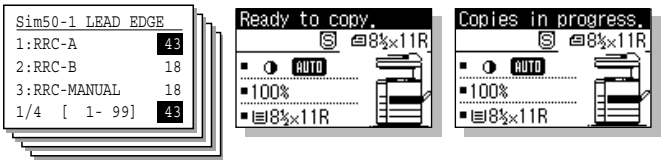
Purpose	Adjustment	
Function (Purpose)	Used to adjust the copy lead edge position.	
Item	Picture quality	Image position

Operation/procedure (Pattern 5)

Select the mode with the arrow keys, enter the adjustment value with the 10-key, and press the [OK] key.

When the [START] key is pressed, a print is made and the display returns to the mode selection menu.

(Initial screen) (Input screen) (Executing screen)



Display items	Content	Setting range	Default
1:RRC-A	Original scan start position adjustment	1-99	43
2:RRC-B	Lead edge cancel adjustment (Main cassette)	1-99	18
3:RRC-MANUAL	Lead edge cancel adjustment (Manual feed cassette)	1-99	18
4:RRC-OPTION	Lead edge cancel adjustment (Option cassette)	1-99	18
5:RRC-DUPLEX	Lead edge cancel adjustment (back of the machine)	1-99	18
6:DEN-B	Rear edge void adjustment	1-99	30
7:DEN-B-DUP	Rear edge void adjustment (Duplex)	1-99	50
8:SIDE VOID	Left edge void adjustment (First print surface)	1-99	18
9:SIDE VOID-DUP	Left edge void adjustment (Duplex)	1-99	18
10:LOSS(OC)	Image loss quantity adjustment	1-5	3

Setup of various copy conditions: Similar to the normal copy mode.

Use of [SPECIAL FUNCTION] key, [JOB STATUS] key, and [INTERRUPT] key is inhibited.

50-5

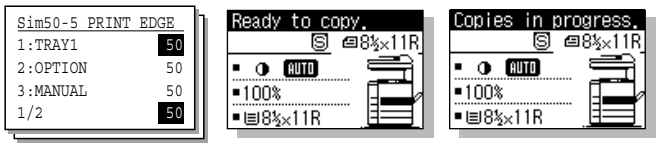
Purpose	Adjustment	
Function (Purpose)	Used to adjust the print image position (top margin) on the print paper in the print mode.	
Item	Picture quality	Print area

Operation/procedure (Pattern 5)

Select the mode with the arrow keys, enter the adjustment value with the 10-key, and press the [OK] key.

When the [START] key is pressed, a print is made and the display returns to the mode selection menu.

(Initial screen) (Input screen) (Executing screen)



Display items	Content	Setting range	Default
1:TRAY1	1st cassette	0-99	53
2:OPTION	Option cassette	1-99	
3:MANUAL	Manual feed		
4:DUPLEX	Back print		

Setup of various copy conditions: Similar to the normal copy mode.

Use of [SPECIAL FUNCTION] key, [JOB STATUS] key, and [INTERRUPT] key is inhibited.

50-6

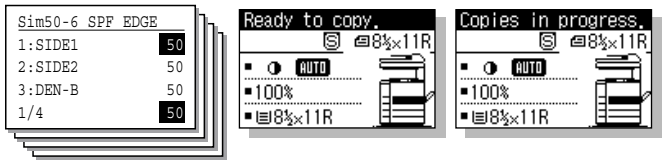
Purpose	Adjustment	
Function (Purpose)	Used to adjust the print image position (top margin) on print paper in the copy mode. (SPF/RSPF)	
Item	Picture quality	Image position

Operation/procedure (Pattern 5)

Select the mode with the arrow keys, enter the adjustment value with the 10-key, and press the [OK] key.

When the [START] key is pressed, a print is made and the display returns to the mode selection menu.

(Initial screen) (Input screen) (Executing screen)



Display items	Content	Setting range	Default
1:SIDE1	Surface original scan start position adjustment value	1-99	50
2:SIDE2	Back original scan start position set value	1-99	50
3:END EDGE	Rear edge void adjustment value (SPF)	1-99	50
4:LOSS(SIDE1)	Surface image loss quantity set value	1-5	3
5:LOSS(SIDE2)	Back image loss quantity set value	1-5	3
6:REARLOS(SIDE1)	Surface rear edge image loss quantity set value	1-5	3
7:REARLOS(SIDE2)	Back rear edge image loss quantity set value	1-5	3

Setup of various copy conditions: Similar to the normal copy mode.

Use of [SPECIAL FUNCTION] key, [JOB STATUS] key, and [INTERRUPT] key is inhibited.

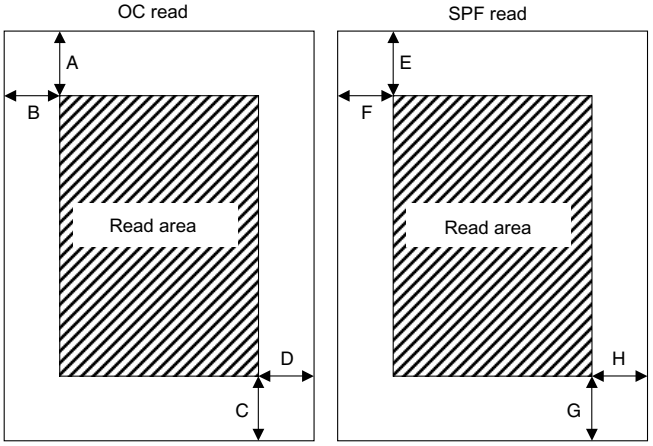
50-8

The adjustments on the machine side must have been normally completed.

Purpose	Adjustment
Function (Purpose)	FAX lead edge adjustment (read)
Related soft SW	SW44-5 to 8, SW45-5 to 8

Operation/procedure

Adjust and set FAX document read lead edge position, read and print the document.



	Adjustment position	Adjustment range	Adjustment unit
A	OC read lead edge position	43 – 50 – 57 lines	8 lines
B	OC read left edge position	43 – 50 – 57 lines	8 dots
C	OC read rear edge position	43 – 50 – 57 lines	8 lines
D	OC read right edge position	43 – 50 – 57 lines	8 dots
E	SPF read lead edge position	43 – 50 – 57 lines	8 lines
F	SPF read left edge position	43 – 50 – 57 lines	8 dots
G	SPF read rear edge position	43 – 50 – 57 lines	8 lines
H	SPF read right edge position	43 – 50 – 57 lines	8 dots

Note: Executable only when the FAX is installed.

50-9

Purpose	Adjustment
Function (Purpose)	FAX lead edge adjustment (print)
Related soft SW	SW74-1 to 4, SW75-5 to 8

Operation/procedure

After the adjustment/setting of FAX print lead edge position, read and print the document.

	Adjustment position	Adjustment range	Adjustment unit
A	Lead edge position	43 – 50 – 57	16 lines
B	Left edge position	43 – 50 – 57	16 dots

Note: Executable only when the FAX is installed.

50-10

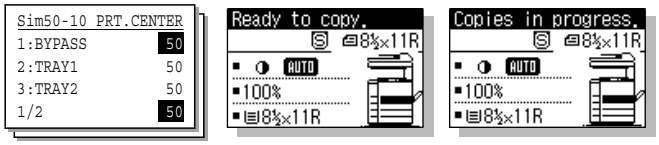
Purpose	Adjustment	
Function (Purpose)	Used to adjust the print image center position. (Adjustment can be made for each paper feed section.)	
Section	Image processing (ICU)	
Item	Picture quality	Image position

Operation/procedure (Pattern 5)

Select the mode with the arrow keys, enter the adjustment value with the 10-key, and press the [OK] key.

When the [START] key is pressed, a print is made and the display returns to the mode selection menu.

(Initial screen) (Input screen) (Executing screen)



Display items	Content	Setting range	Default
1:BYPASS	Manual feed	1-99	50
2:TRAY1	1st cassette		
3:TRAY2	2nd cassette		
4:TRAY3	3rd cassette		
5:TRAY4	4th cassette		
6:DUPLEX	Back print		

Setup of various copy conditions: Similar to the normal copy mode.

Use of [SPECIAL FUNCTION] key, [JOB STATUS] key, and [INTERRUPT] key is inhibited.

50-12

Purpose	Adjustment	
Function (Purpose)	Used to adjust the print image center position. (Adjustment can be made for each document mode.)	
Section	Image processing	
Item	Picture quality	Image position

Operation/procedure (Pattern 5)

Select the mode with the arrow keys, enter the adjustment value with the 10-key, and press the [OK] key.

When the [START] key is pressed, a print is made and the display returns to the mode selection menu.

(Initial screen) (Input screen) (Executing screen)

Display items	Content	Setting range	Default
1:OC	OC	1-99	50
2:SPF(SIDE1)	SPF front surface		
3:SPF(SIDE2)	SPF back surface		

Setup of various copy conditions: Similar to the normal copy mode.

Use of [SPECIAL FUNCTION] key, [JOB STATUS] key, and [INTERRUPT] key is inhibited.

51

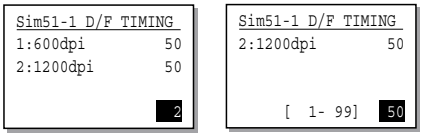
51-1

Purpose	Adjustment
Function (Purpose)	Used to adjust the OPC drum separation pawl ON time.
Section	Image process (Photoconductor/Developing/Transfer/Cleaning)
Item	Operation

Operation/procedure (Pattern 2)

Enter the adjustment value with the 10-key and press the [OK] key, and the entered value is registered.

(Initial screen) (Input screen)



Display items	Setting range	Default
1:600dpi	1-99	50
2:1200dpi		

51-2

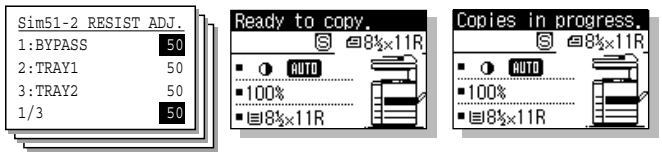
Purpose	Adjustment
Function (Purpose)	Used to adjust the contact pressure of paper onto the resist roller in each section (copier paper feed section, duplex paper feed section, SPF paper feed section). (When the print image position varies greatly for the paper or when a lot of paper jam troubles occur, the adjustment is required.)
Section	Paper transport (Discharge/Switchback/Transport)
Item	Operation

Operation/procedure (Pattern 5)

Select the mode with the arrow keys, enter the adjustment value with the 10-key, and press the [OK] key.

When the [START] key is pressed, a print is made and the display returns to the mode selection menu.

(Initial screen) (Input screen) (Executing screen)



Display items	Content	Setting range	Default
1:BYPASS	Manual feed	1-99	50
2:TRAY1	1st cassette		
3:TRAY2	2nd cassette		
4:TRAY3	3rd cassette		
5:TRAY4	4th cassette		
6:DUPLEX	Back print		
7:SPF(SIDE1)	SPF front surface		
8:SPF(SIDE2)	SPF back surface		

Setup of various copy conditions: Similar to the normal copy mode.

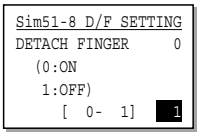
Use of [SPECIAL FUNCTION] key, [JOB STATUS] key, and [INTERRUPT] key is inhibited.

51-8

Purpose	Setting
Function (Purpose)	Used to set to disable the operation of the separation pawl of the photoconductor drum.
Section	Image process (Photoconductor/Developing/Transfer/Cleaning)
Item	Operation

Operation/procedure (Pattern 1)

Enter the adjustment value with the 10-key and press the [OK] key, and the entered value is registered.



Display items	Content	Setting range	Default
0:ON	Enable	0-1	0
1:OFF	Disable		

61

61-1

Purpose	Operation test/check
Function (Purpose)	Used to test the operation of the LSU.
Section	LSU
Item	Operation

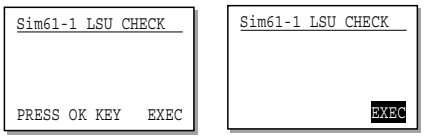
Operation/procedure

Pressing the [OK] key performs the LSU test.

Used to set the LSU to ON state and check that the sync signal (HSYNC/) is outputted or not.

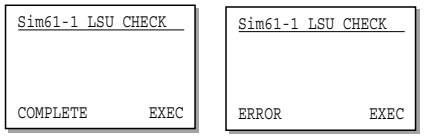
After operation for 30 sec, the result is displayed. (Interruption cannot be made for 5 sec after starting the operation.)

(Initial screen) (Executing screen)



Interruption is inhibited during execution. During execution, [EXEC] is highlighted.

(Result screen/Normal) (Result screen/Abnormal)



63

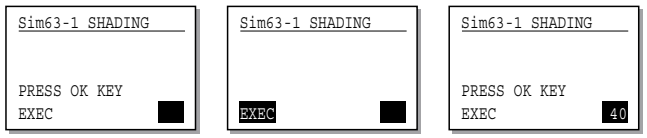
63-1

Purpose	Adjustment/setting/operation data output/check (display/print)
Function (Purpose)	Used to check the result of shading correction. (The shading correction data are displayed.)
Section	Scanner (Exposure)
Item	Operation

Operation/procedure

Pressing the [OK] key performs shading, and displays the result (center pixel).

(Initial screen) (Executing screen) (Screen after execution screen)



63-7

Purpose	Adjustment
Function (Purpose)	Used to adjust the SPF white correction start pixel position automatically. This adjustment is performed after the lens unit is replaced.
Section	Scanner
Item	Operation

Operation/procedure

Set the SPF unit OPEN, and press the [OK] key.

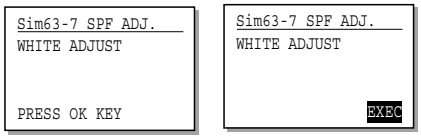
[ ] indicates the order number of the pixel of the white sheet for SPF exposure correction in the SPF position.

If the adjustment is normally completed, "COMPLETE" is displayed and data are written into the EEPROM.
In case of an abnormality, "ERROR" is displayed and no data is written into the EEPROM.

The SPF white correction start pixel = Displayed pixel position - 34

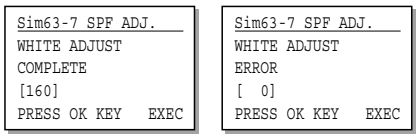
If the simulation is executed with the SPF unit closed, an error is resulted.

(Initial screen) (Executing screen)



Interruption is inhibited during execution.
During execution, [EXEC] is highlighted.

(Initial screen with the execution result displayed)
Normal end screen Abnormal end screen



64

64-1

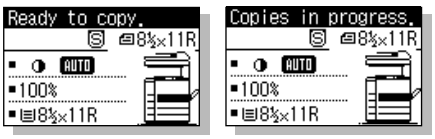
Purpose	Operation test/check
Function (Purpose)	Used to check the operation of the printer function (auto print operation).
Section	Printer
Item	Operation

Operation/procedure

Pressing the [START] key makes a print by 2 by 4 mode. After completion of printing, the menu returns to the initial menu.

Pressing the [CA] key cancels the simulation mode.

(Input screen) (Executing screen)



65

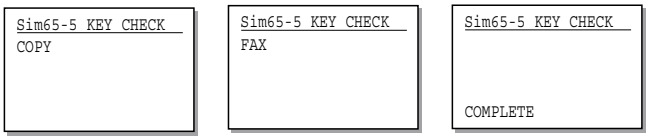
65-5

Function (Purpose)	Used to check the operation panel.
Section	Operation (screen/operation)

Operation/procedure

Check the key input of the operation panel.
Press the keys displayed on LCD sequentially.
After completion of all key entries, "COMPLETE" is displayed.

(1) (2) (3)



66

66-1

Purpose	Adjustment/Setting/Check
Function (Purpose)	FAX related soft SW setting

Operation/procedure

Display FAX software SW on LCD, and set/change those with 10-key.

Note: Executable only when the FAX is installed.

66-2

Purpose	Adjustment/Setting/Check
Function (Purpose)	Initial set for the value of the FAX soft SW

Operation/procedure

Used to clear the FAX-related soft switches except for the line signal adjustment value and the machine adjustment value and to set default values (which differ depending on the country code separately entered.)

Note: Executable only when the FAX is installed.

66-3

Purpose	Adjustment/Setting/Check
Function (Purpose)	FAX PWB memory check

Operation/procedure

Read/write can be checked for FAX PWB memory.

The check result is displayed separately for each memory.

1. Memory to be checked

DRAM		
SRAM		
Flash ROM	Program area	SUM check only
	Memory area	
Option memory		The memory size follows the automatically detected value.
PAGE		

2. Detailed procedure

1	"55H" is written to all the addresses of each memory, and the address data are read in sequence to check that they were properly written.
2	"AAH" is written to all the addresses of each memory, and the address data are read in sequence to check that they were properly written.

3	"00H" is written to all the addresses of each memory, and the address data are read in sequence to check that they were properly written.
4	Perform checks 1 - 3 sequentially. If there is no abnormality, it is "OK." If there is any abnormality, "NG" is notified to the error address.
5	After completion of check, the memory is returned to the initial state. (CPU is not reset)

Interruption cannot be made during operation.

Note: Executable only when the FAX is installed.

66-4

Purpose	Adjustment/Setting/Check
Function (Purpose)	Signal send mode
Related soft SW	SW5-5 to 8 (signals send level) SW23-1 to 4 (RBT ON time) SW23-5 to 8 (RBT OFF time) SW43-1 to 5 (DTMF signal send time)

Operation/procedure

By setting the message No., the signal is sent to the line and the speaker of the body. (The signal is continuously sent until the interruption command is provided by pressing the [BACK] key.)

The signal send level can be selected from 0dB or the soft SW set value. However, the level setup is not required for 01, 31 - 35, the selection may does not appear. After completion of the mode, the signal send level is returned to the soft SW set value before execution of the mode.

Signal number	Send signal	Send level Selection menu
01	Signal not send	None
26	7EH Flag signal	Yes
27 to 30	Tone signal	Yes
31	Pseudo-ringer sound ([ON HOOK] key ON)	None
32	Voice message (no sound)	None
	Under the state where the ring back tone can be sent to the line, keep the sound composition IC volume to 0.	
33	Ring back tone (no sound)	None
	Under the state where the ring back tone can be sent to the line, keep the G/A volume to 0.	
34	Dial pulse (make)	1: 0dB 2: Soft SW
	Maintain the make state with keeping the condition to be able to send to the dial pulse line.	
35	Dial pulse (break)	1: 0dB 2: Soft SW
	Maintain the break state with keeping the condition to be able to send to the dial pulse line.	
Other than the above	FFH	Yes

Note: Executable only when the FAX is installed.

66-6

Purpose	Adjustment/Setting/Check
Function (Purpose)	Printing the confidential password

Operation/procedure

The confidential ID table (confidential BOX numbers, confidential BOX names, and confidential password) is printed.

The confidential data of My company mode is printed separately.

Note: Executable only when the FAX is installed.

66-7

Purpose	Adjustment/Setting/Check
Function (Purpose)	Print the screen memory contents

Operation/procedure

Used to input all image data (including confidential reception data, remote send image, not-sent image) stored in image memory of the FAX section.

The output image is remained even after outputting.

Note: Executable only when the FAX is installed.

66-8

Purpose	Adjustment/Setting/Check
Function (Purpose)	Voice Message send

Operation/procedure

By setting the message No., the sound message is sent to the line and the speaker of the body. (The message is repeated until the interruption command is provided by pressing the [BACK] key.)

Message number	Voice message
1	"Hold the line a minute, please send fax." (TEL/FAX voice response)
2	"Hold the line a minute." (TEL/FAX voice response)
3	"Not around here, please send fax." (TEL/FAX voice response)
4	"Ding Dong" (Sound delivered when switching to remote reception)

Message No. 4 can be heard by an external telephone speaker.

Note: Executable only when the FAX is installed.

66-10

Purpose	Adjustment/Setting/Check
Function (Purpose)	Image data memory clear

Operation/procedure

Used to clear all image data (including confidential reception data) stored in image memory of the FAX section.

The management table is also cleared (initialized) at the same time.

Note: Executable only when the FAX is installed.

66-11

Purpose	Adjustment/Setting/Check
Function (Purpose)	300bps signals send

Operation/procedure

By setting the signal number, the specified signal is delivered to the line at the speed of 300bps. (The signal is continuously sent until the interruption command is provided by pressing the [BACK] key.)

The signal send level can be selected from 0dB or the soft SW set value.

The signal send level is returned to the soft SW set value before execution of the mode after completion of the mode.

Number	Signal	Number	Signal
1	No signal (CML ON)	4	00000
2	11111	5	010101
3	11110	6	00001

Note: Executable only when the FAX is installed.

66-13

Purpose	Adjustment/Setting/Check
Function (Purpose)	Send test and adjustment of the dial pulse and DTMF signal.
Related soft SW	SW53-1 to 4 (DTMF high group end level) SW53-5 to 8 (DTMF low group send level) SW67-1 to 4 (DP 10PPS make time) SW67-5 to 8 (DP 10PPS make time)

Operation/procedure

The send test of dial pulse and DTMF signal is performed and the make time adjustment of dial pulse and the DTMF signal send level adjustment are performed if necessary.

1. Dial pulse (10pps) send test

2. Dial pulse (20pps) send test

- Used to set the make time. By performing the test, the registered dial pulse of max. 100 digits can be sent from the line.
- When "*" and "#" are included in the registered dial number, they are disregarded and the number is not processed as a dial.
- The make time set in the dial test is written into the corresponding soft SW.
- Default: 1 2 3 4 5 6 7 8 9 0
  Operate the [←] [→] key in DP dial selection menu to switch. (Time before pulse delivery can be changed as 2sec → 4sec → 8sec.)

3. DTMF signal send test

- Set the signal send level to 0dB or the soft SW set value.
  Used to set the high level group and the low level group of DTMF signal send level. By executing the test, DTMF signal is sent from the line to a recorded dial number of max. 100 digits.
- The high group/low group value of the DTMF signal send level set in the dial test is written into the corresponding soft SW.
- Default: 1 2 3 4 5 6 7 8 9 * 0 #
  In the PB dial select menu, press [←][→] keys to select.
  Pressing the [CLEAR] key during the operation clears the input value and returns to the value input menu.
- Max. 100 digits can be assigned to each dial (0 - 9, *, #). While the default value is displayed at first, a desired value can be entered and the entered value is stored on the FAX side until the menu is canceled.
- After completion of the mode, the signal send level is returned to the soft SW set value before execution of the mode.

Make time	1ms for input value of 1. Adjust so that the dial pulse make rate is within 33±3%. (For North America, 40±3%.) Dial pulse make rate = Make time / (Make time + Break time)
Break time	It is obtained from the formula below and automatically set. PPS = 1000 / (make time + break time)
DTMF signal adjustment	The signal send levels are classified into the high group and the low group. The send level is 0.5dB for each 1 of input value.

Note: Executable only when the FAX is installed.

66-17

Purpose	Adjustment/Setting/Check
Function (Purpose)	DTMF signal send
Related soft SW	SW53-1 to 4 (DTMF high group end level) SW53-5 to 8 (DTMF low group send level)

Operation/procedure

Set the signal send level to 0dB or the soft SW set value, and specify one dial to be delivered to.

The DTMF signal of the specified dial number is delivered until the interruption command is provided by pressing the [BACK] key.) When another dial number is specified during delivery of the signal, the new dial number is delivered.

The signal send level is returned to the soft SW set value before execution of the mode after completion of the mode.

Note: Executable only when the FAX is installed.

66-21

Purpose	Adjustment/Setting/Check
Function (Purpose)	FAX information print

Operation/procedure

The following FAX information is printed.

	Print information	Details
A	User switch list	
B	Soft SW list	
C	Dump list	
D	System error	Used to print the system error log (error number and time). For this operation, the system error log is always stored as the ring buffer in the SRAM 256byte area.
E	Protocol monitor	Regardless of soft SW19-1 status, the protocol monitor of the preceding communication is printed. (Printing is allowed at any time before starting the next communication.) For this operation, the protocol monitor of one communication is always buffered.

Note: Executable only when the FAX is installed.

66-22

Purpose	Adjustment/Setting/Check
Function (Purpose)	Handset sound volume adjustment
Related soft SW	SW13-1 to 2

Operation/procedure

By selection of the sound volume number, the sound volume of the handset can be set or changed. The set value is written into the soft SW.

During execution of the simulation, the reply sound message for auto selection of TEL/FAX, "Hold the line for a while," is delivered.

Sound volume number	Sound volume
1	Small
2	Medium
3	Large

Note: Executable only when the FAX is installed.

66-30

Purpose	Adjustment/Setting/Check
Function (Purpose)	Recognize TEL/LIU state change.

Operation/procedure

When the relay state of the polarity reverse relay, the handset hook switch, or the external telephone hook switch is changed, the content of change is displayed regardless of the soft SW setup. The display of change is kept until an interruption command is supplied by pressing the [BACK] key.

Check signal	Notification contents	
	Signal low	Signal high
HS2	ON	OFF
HS1	ON	OFF
RHS	ON	OFF
EXHS	ON	OFF

Note: Executable only when the FAX is installed.

66-32

Purpose	Adjustment/Setting/Check
Function (Purpose)	Receive data check

Operation/procedure

The data received from the line are checked to insure that the following reception data are identical to the judgment data. If identical, "OK" is notified. If not, "NG."

A judgment is made according to the reception start data. Continuous coincidence is required.

Receive speed	300bps
Receive data	00
Number of judgment data	100

Note: Executable only when the FAX is installed.

66-34

Purpose	Adjustment/Setting/Check
Function (Purpose)	Communication time measurement display
Related soft SW	SW10-1

Operation/procedure

The send/receive test is performed, and the time required for send/receive of the image data in the test is measured and displayed.

Setup on the user side when executing communication		Communication : Memory send means : Normal Character Picture quality : Lighter Density : ON ECM : OFF Sender information
Measuring range	Send	From flag reception before sending of image data until sending of RCP frame
	Receive	From flag reception before reception of image data until reception of RCP frame
Mode when measuring		Used to make communication not in a simulation process but in the normal screen and measure the time.
How to check the time		Enter the simulation for communication time check and check the time.
Measuring unit		msec

When there are two or more send/receive operations of image data in one communication, only the time of the last send/receive data near the end is measured.

Note: Executable only when the FAX is installed.

66-37

Purpose	Adjustment/Setting/Check
Function (Purpose)	Speaker sound volume adjustment
Related soft SW	SW 86-1, 2 (call sound) SW 85-1, 2 (line monitor sound) SW 84-1, 2 (on hook) SW 88-1, 2 (read end sound) SW 89-1, 2 (communication end sound) SW 87-1, 2 (DTMF send sound) SW75-1, 2 (send end sound length) SW75-3, 4 (receive end sound length)

Operation/procedure

The following test sound is delivered to the line and the speaker to adjust the sound kind and volume.

The send level to the line is the set value of soft SW.

The set values of the selected sound kind and volume are written to each soft SW.

1. Sound kinds pattern

	Sound kinds (Test sound)	Sound volume set value				Sound volume Pattern
		0	1	2	3	
1	Call sound	NS	S	M	L	01 to 35
2	Lline monitor sound (Test sound : Communication signal sound)	NS	S	M	L	01 to 35
3	On hook (Test sound : Communication signal sound)	Setting Disable	S	M	L	01 to 35
4	Read complete sound	NS	S	M	L	01 to 35
5	Communication end sound	NS	S	M	L	01 to 35
6	DTMF signal send sound	NS	S	M	L	01 to 35

NS=No Sound S=Small M=Medium L=Large

2. Sound volume pattern

Sound volume	VR set value							Sound volume	VR set value						
	1	2	3	4	5	6	7		1	2	3	4	5	6	7
01	S	M	L					20		S		M	L		
02	S	M		L				21		S		M		L	
03	S	M			L			22		S		M			L
04	S	M				L		23		S			M	L	
05	S	M					L	24		S			M		L
06	S		M	L				25		S				M	L
07	S		M		L			26			S	M	L		
08	S		M			L		27			S	M		L	
09	S		M				L	28			S	M			L
10	S			M	L			29			S		M	L	
11	S			M		L		30			S		M		L
12	S			M			L	31			S			M	L
13	S				M	L		32				S	M	L	
14	S				M		L	33				S	M		L
15	S					M	L	34				S		M	L
16		S	M	L				35					S	M	L
17		S	M		L										
18		S	M			L									
19		S	M				L								

S=Small M=Medium L=Large

Note: Executable only when the FAX is installed.

66-38

Purpose	Adjustment/Setting/Check
Function (Purpose)	Time setting/check

Operation/procedure

Read/write the time (year, month, day, min., sec.) on RTC of FAX PWB.

Note: Executable only when the FAX is installed.

66-41

Purpose	Adjustment/Setting/Check
Function (Purpose)	CI signal check
Related soft SW	SW12-6 to 7, SW55-1 to 7

Operation/procedure

The call signal from CI pin is detected to deliver the call sound to the line and the speaker. The volume of call sound follows the soft SW.

Signal detection and delivery of pseudo-call sound at detection are executed until the interruption command is provided by pressing the [BACK] key.

Note: Executable only when the FAX is installed.

66-50

Purpose	Adjustment/Setting/Check
Function (Purpose)	FAST SRAM clear

Operation/procedure

SRAM data in FAST area is intialized.

Note: Executable only when the FAX is installed.

66-51

Purpose	Adjustment/Setting/Check
Function (Purpose)	Signal detection check
Related soft SW	SW13-3, 4 (call sound volume) SW32-1 to 4 (Distinctive Ring) SW12-6, 7 (CI detection pattern) (00:4 Sine wave 10:3 Sine wave 01:2 Sine wave) SW26-3, 4 (speaker volume) SW35-3, 4 (CI extinction maximum OFF time) SW51-7, 8 (BT detection cycle) SW52-1, 2 (BT/DT detection level) SW55-1 to 7 (detection possible time of CI signal) SW56-5, 6 (DT, BT filter efficiency) SW56-7 (DP, BT detection level)

Operation/procedure

The detection test of signals is performed and the test result is displayed.

1. Detected signal

Detected in off-hook.	CI, CNG, FNET, DTMF
Detected in off-hook.	BusyTone, CNG DialTone, CED SDT, flag, DTMF

CI displays the detected ring pattern simultaneously.

2. Display combination

	Combination	Hook state
A	CI, CNG, FNET	On hook
B	CED, CNG, BusyTone, DTMF	Off hook
C	CED, Flag, BusyTone	
D	CED, Flag, DialTone	
E	CED, Flag, SDT	

The display conforms to the detection frequency and pattern specified according to each country information.

The detection signal level conforms to the range set by the soft SW.

The detected table and routines are shared with actual communications.

Note: Executable only when the FAX is installed.

66-52

Purpose	Adjustment/Setting/Check
Function (Purpose)	Pseudo-ringer check

Operation/procedure

- The pseudo-ringer sound is provided in both of the main speaker and the external telephone.
- Holding the handset or the external telephone set stops the bell. Hanging it restarts ringing. This operation is continued until the interruption command is supplied by pressing the [BACK] key.
- The LCD displays the TEL/LIU status, indicating the HOOK condition.
- During sending the pseudo-ringer, RBT (Ring Back Tone) is delivered to the line.
- The bell is ON for 1sec and OFF for 2sec. When off-hooking with the bell ON, the HOOK detection at pseudo-ringer ringing can be checked. When off-hooking with the bell OFF, the HOOK detection before pseudo-ringer ringing can be checked.

Note: Executable only when the FAX is installed.

Note	Japan only

66-53

Purpose	Adjustment/Setting/Check
Function (Purpose)	SRAM backup

Operation/procedure

Used to save the SRAM data to the expanded memory and read it.

When reading, however, the current FAX software version and the header FAX software version are collated together. If they are not identical, reading cannot be performed.

1. Back-up targets

Target data	Registration information, soft SW information, FAX counter information (Information for each department is not required.)
Data out of target	Image management information, communication reservation information

2. Internal process

SRAM stack processing

1) Used to check if the installed expansion memory is ready to use.
   If an expanded memory is available, write the target data of the SRAM.
2) After completion of writing, management information is written to the management information block.
3) For the management information, refer to the table below.
   However, the FAX program version No. area is written into the data version no. area (FFF0 - FFFF).

Lowest address	Area name	Content	Expanded memory Upper 2MB
0000 to FFAF	Reserved		←
FFB0 to FFCF	TEST pattern		TEST pattern *Reference
FFD0 to FFDF	ROM data name	ASCII 16 Byte	REGISTRATION
FFE0 to FFEF	Data version No.	ASCII 16 Byte	FAX program version No.
FFF0 to FFF1	Write complete FLG	ERASE=H'FFFF Completion=H'0000	←
FFF2 to FFF3	SRAM clear flag	Clear/No=H'0000 Clear/Yes=H'0001	Invalid
FFF4 to FFF7	Start address	Data start address	←
FFF8 to FFFB	End address	Data end address	←
FFFC to FFFF	SUM	Data check sum	←

*TEST pattern

Recognized that the card normally reads the next data.

Address	Date	Address	Date	Address	Date
FFB0	0001	FFBC	0040	FFC8	1000
FFB2	0002	FFBE	0080	FFCA	2000
FFB4	0004	FFC0	0100	FFCC	4000
FFB6	0008	FFC2	0200	FFCE	8000
FFB8	0010	FFC4	0400	–	–
FFBA	0020	FFC6	0800	–	–

Additional process when turning on the power

In normal cases, when installation of an expanded memory is detected after turning ON the power, the expanded memory is cleared. When, however, there are some SRAM data in the expanded memory, it must not be cleared. When the ROM data name (FED0 - FFDF) in the management information of the expanded memory is "REGISTRATION," the expanded memory is not cleared.

Process when reading the expanded memory

1) After checking the data in the management information, reading from the expanded memory and writing into the SRAM are performed.
2) After completion of writing into the SRAM, the expanded memory is initialized for normal use again.
3) After completion of initializing the expanded memory, the SRAM RESTORE operation of the simulation is terminated.

Remark 1: SRAM data saving procedure

1) Before saving, install the expanded memory to be used. (During power OFF)
2) In the SRAM backup menu (66-53), SRAM BACK UP is selected, and the process to save SRAM data into the expanded memory is executed.
3) After completion of saving, turn off the power.

Remark 2: SRAM data reading procedure

1) Install the expanded memory into which data are written according to the above procedures. (During power OFF)
2) In the SRAM backup menu (66-53), SRAM RESTORE is selected to write the SRAM data which was saved into the expanded memory into the SRAM of the FAX board.

Note: Executable only when the FAX is installed.

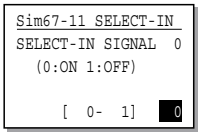
67

67-11

Purpose	Setting
Function (Purpose)	Used to set the Select-IN signal.

Operation/procedure (Pattern 1)

Enter the adjustment value with the 10-key and press the [OK] key, and the entered value is registered.



Setting range	0-1
Default	0

Note: Executable only when the PCL is installed.

67-14

Function (Purpose)	Used to check write/comparison of flash programs.

Operation/procedure

Download PCL.

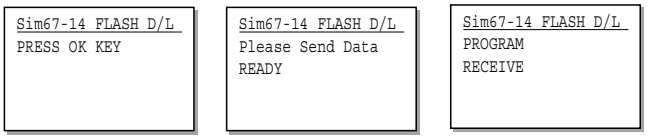
Pressing the [OK] key displays "Please Send Data" "Ready" and the data is sent from the PC under the MS-DOS command of FCOPY and the file name.

Used to overwrite and check the flash device while displaying its process status.

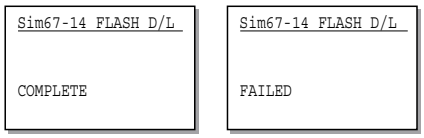
After completion, the result is displayed.

(It takes a little time to display READY.)

(1) (2) (3)



(Normal end screen) (Abnormal end screen)



(Flash Device)
PROGRAM
BOOTROM
PS KANJI FONT
ESC/P KANJI FONT
OPTION FONT

(Processing state)
RECEIVE
ERASE
WRITE
VERIFY

Press the [CA] key to cancel the simulation and reset.

Note: Executable only when the PCL is installed.

67-17

Function (Purpose)	Used to clear NVRAM.

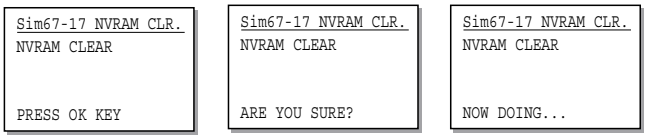
Operation/procedure (Pattern 7)

Pressing the [OK] key displays the confirmation message.

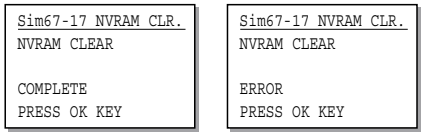
Press the [OK] key again to clear. Press the [BACK] key to interrupt clearing.

If there is no abnormality after Clear operation, "COMPLETE" is displayed. If there is any abnormality, "ERROR" is displayed.

(Initial screen) (Process check screen) (Executing screen)



(Normal end screen) (Abnormal end screen)



Note: Executable only when the PCL is installed.

67-18

Function (Purpose)	Used to clear the data area for FLASH ROM Network Scanner Application.

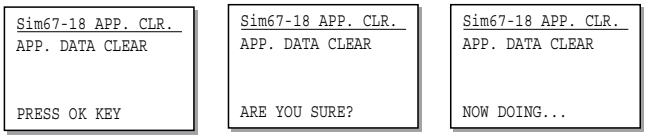
Operation/procedure (Pattern 7)

Pressing the [OK] key displays the confirmation message.

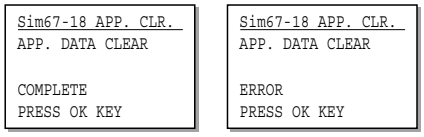
Press the [OK] key again to clear. Press the [BACK] key to interrupt clearing.

If there is no abnormality after Clear operation, "COMPLETE" is displayed. If there is any abnormality, "ERROR" is displayed.

(Initial screen) (Process check screen) (Executing screen)



(Normal end screen) (Abnormal end screen)



Note: Executable only when the PCL is installed.

67-20

Function (Purpose)	Used to check the network connection when the scan option is installed.

Operation/procedure

The network scanner is checked.

When [OK] key is pressed, "Please Send Data" and "READY" are displayed, and then ftp is booted from MS-DOS.

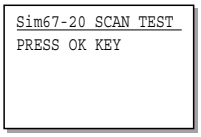
Put the file name, and data are transmitted from the PC.

The process is displayed. Check the display.

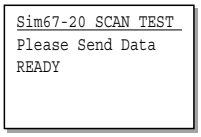
After completion, the result is displayed.

(It takes a little time to display READY.)

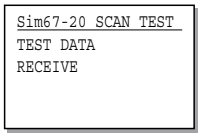
(1)



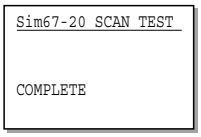
(2)



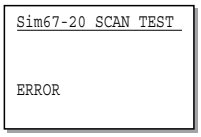
(3)



(Normal end screen)



(Abnormal end screen)



(TEST DATA)
TEST DATA

(Process status)
RECEIVE
TESTING

Pressing [CA] key cancels the simulation resets the operation.

Note: Executable only when PCL and NIC are installed.

[9] TROUBLE CODE LIST

1. List

Trouble code		Trouble contents	Trouble detection
Main code	Sub code		
E1	00	IMC board communication trouble	MCU
	10	IMC board trouble	
	11	IMC ASIC error	
	12	IMC CODEC error	
	13	IMC board flash ROM error	
	14	IMC board Work RAM error	
	15	IMC board Page Memory error	
	16	IMC board image compression store memory error	
	17	IMC board smoothing IC error	
	80	IMC PWB communication trouble (protocol)	
	81	IMC PWB communication trouble (Parity)	
	82	IMC PWB communication trouble (Overrun)	
	84	IMC PWB communication trouble (Framing)	
	88	IMC PWB communication trouble (Time-out)	
E7	02	LSU trouble	
	10	Shading trouble (black correction)	
	11	Shading trouble (white correction)	
	12	Shading trouble	
F1	00	Finisher communication trouble	FIN
	01	Finisher jogger shift trouble	
	06	Finisher shift motor abnormality	
	08	Finisher staple shift motor trouble	
	11	Pusher motor trouble	
	15	Finisher elevator motor trouble	
F2	02	Toner supply failure	
	04	Identification error	
		Model error	
		Type error	
		Destination error	
		Data abnormality	
		Misc error	
F5	02	Copy lamp lighting abnormality	
F6	00	F6-**: MCU-FAX communication trouble	MCU
	10	FAX control PWB trouble	
	80	FAX control PWB communication trouble (Protocol)	
	81	FAX control PWB communication trouble (Parity)	
	82	FAX control PWB communication trouble (Over-run)	
	84	FAX control PWB communication trouble (Framing)	
	88	FAX control PWB communication trouble (Timeout)	
	99	Machine-FAX board language error	
F9	00	F9-**: MCU-PRT communication trouble	MCU
	10	Printer PWB trouble	
	80	Printer PWB communication trouble (Protocol)	
	81	Printer PWB communication trouble (Parity)	
	82	Printer PWB communication trouble (Overrun)	
	84	Printer PWB communication trouble (Framing)	
	88	Printer PWB communication trouble (Timeout)	
	99	Machine-PCL board language error	
H2	00	Thermistor open detection	
H3	00	Heat roller abnormally high temperature	
H4	00	Heat roller abnormally low temperature	
H5	01	5 continuous T10D(T20D) not-reaching JAM	
	02	Fusing thermistor abnormality	
L1	00	Scanner feed trouble	
L3	00	Scanner return trouble	
L4	01	Main motor lock	
	11	Shifter motor trouble	
L6	10	Polygon motor lock trouble	
L8	01	Zero cross detection error	
U2	04	EEPROM communication error	
	11	Counter check sum error	
	12	Adjustment value check sum error	
	20	Machine speed code data error	
	40	CRUM chip communication error	
U7	00	RIC communication trouble	
U9	00	U9-**: MCU-OPE communication trouble	OPE
	80	Operation control PWB communication trouble (Protocol)	
	81	Operation control PWB communication trouble (Parity)	
	82	Operation control PWB communication trouble (Overrun)	
	84	Operation control PWB communication trouble (Framing)	
	88	Operation control PWB communication trouble (Time-out)	
	99	Operation panel language error	
CE	00	The other communication error has occurred.	Network
	01	The print server card (AR-NC3D) is not installed or defective.	Network
	02	The specified mail server or the FTP server is not found.	Network
	03	The specified server does not correspond during image transmission.	Network
	04	The entered account name of the FTP server or the password is invalid.	Network
	05	The entered directory of the FTP server is invalid.	Network
EE	EL	Developer adjustment trouble (Over-toner abnormality)	
	EU	Developer adjustment trouble (Under-toner abnormality)	
PF	00	RIC copy inhibit signal received	

2. Self diagnostics

Trouble code		Details of trouble	
Main code	Sub code		
E1	00	Content	E1-**: MCU-IMC communication trouble
		Details	Communication establishment error/ framing/parity/protocol error
		Cause	IMC PWB connector disconnection IMC PWB MCU PWB harness failure Motherboard connector pin breakage IMC PWB ROM defect, data failure
		Check and remedy	Check the connectors and harness of the IMC PWB and MCU PWB. Check the grounding of the copier. Check the ROM of the IMC PWB.
	10	Content	IMC PWB trouble
		Details	Communication trouble between MCU and IMC PWB
		Cause	IMC PWB connector disconnection IMC PWB MCU PWB harness failure Motherboard connector pin breakage IMC PWB ROM defect, data failure
		Check and remedy	Check the connectors and harness of the IMC PWB and MCU PWB. Check the grounding of the copier. Check the ROM of the IMC PWB.
	11	Content	IMC board ASIC error
		Details	ASIC abnormality on IMC board
		Cause	IMC board abnormality
		Check and remedy	Replace the IMC PWB.
	12	Content	IMC board CODEC IC error
		Details	CODEC IC (JBIG chip) abnormality on IMC board
		Cause	IMC board abnormality
		Check and remedy	Replace the IMC PWB.
		Remarks	JBIG IC abnormality
	13	Content	IMC board flash ROM error
		Details	Flash ROM abnormality on IMC board
		Cause	IMC board abnormality
		Check and remedy	Replace the IMC PWB. "When the program download is abnormally terminated, a error may occur. In this case, download the program again."
		Remarks	Program ROM abnormality
	14	Content	IMC board Work RAM error
		Details	IMC extended compression memory module installation error IMC extended compression memory access error
		Cause	IMC expanded memory module installation trouble IMC expanded memory module trouble IMC expanded memory contact trouble IMC board abnormality
		Check and remedy	Check installation of the expanded memory module. (Spec: Added to Slot 1.) Replace the expanded memory module. Replace the IMC PWB.
		Remarks	Extend memory abnormality for compressed image store (DIMM module)

Trouble code		Details of trouble	
Main code	Sub code		
E1	15	Content	IMC board Page Memory error
		Details	IMC Page Memory abnormality
		Cause	IMC board abnormality
		Check and remedy	Replace the IMC PWB.
		Remarks	Print Buffer Memory abnormality
	16	Content	IMC board compression image store memory error
		Details	IMC standard compression memory access error
		Cause	IMC board abnormality
		Check and remedy	Replace the IMC PWB.
	17	Content	IMC board smoothing IC error
		Details	IMC smoothing IC abnormality
		Cause	IMC board abnormality
		Check and remedy	Replace the IMC PWB.
	80	Content	IMC PWB communication trouble (protocol)
		Details	Communication trouble between MCU and IMC PWB (Protocol error)
		Cause	IMC PWB connector disconnection IMC PWB MCU PWB harness failure Motherboard connector pin breakage IMC PWB ROM defect, data failure
		Check and remedy	Check the connectors and harness of the IMC PWB and MCU PWB. Check the grounding of the copier. Check the ROM of the IMC PWB.
	81	Content	IMC PWB communication trouble (Parity)
		Details	Communication trouble between MCU and printer IMC (Parity error)
		Cause	IMC PWB connector disconnection IMC PWB MCU PWB harness failure Motherboard connector pin breakage IMC PWB ROM defect, data failure
		Check and remedy	Check the connectors and harness of the IMC PWB and MCU PWB. Check the grounding of the copier. Check the ROM of the IMC PWB.
	82	Content	IMC PWB communication trouble (Overrun)
		Details	Communication trouble between MCU and IMC PWB (Overrun error)
		Cause	IMC PWB connector disconnection IMC PWB MCU PWB harness failure Motherboard connector pin breakage IMC PWB ROM defect, data failure
		Check and remedy	Check the connectors and harness of the IMC PWB and MCU PWB. Check the grounding of the copier. Check the ROM of the IMC PWB.

Trouble code		Details of trouble	
Main code	Sub code		
E1	84	Content	IMC PWB communication trouble (Framing)
		Details	Communication trouble between MCU and IMC PWB (Framing error)
		Cause	IMC PWB connector disconnection IMC PWB MCU PWB harness failure Motherboard connector pin breakage IMC PWB ROM defect, data failure
		Check and remedy	Check the connectors and harness of the IMC PWB and MCU PWB. Check the grounding of the copier. Check the ROM of the IMC PWB.
	88	Content	IMC PWB communication trouble (Time-out)
		Details	Communication trouble between MCU and IMC PWB (Time-out error)
		Cause	IMC PWB connector disconnection IMC PWB MCU PWB harness failure Motherboard connector pin breakage IMC PWB ROM defect, data failure
		Check and remedy	Check the connectors and harness of the IMC PWB and MCU PWB. Check the grounding of the copier. Check the ROM of the IMC PWB.
E7	02	Content	LSU trouble
		Details	BD signal from LSU is not detected in a constant cycle. (Kept OFF or ON)
		Cause	LSU connector or LSU inside harness trouble or disconnection Polygon motor rotation abnormality Laser does not illuminate. MCU PWB failure
		Check and remedy	Check for disconnection of the LSU connector. Check the LSU operation with SIM 61-1. Check that the polygon motor rotates normally. Check laser LED lighting. LSU replacement Replace the MCU PWB.
	10	Content	Shading trouble (black correction)
		Details	CCD black reference plate scan level abnormality when the copy lamp turns off.
		Cause	Flat cable installation failure to CCD unit CCD unit error
		Check and remedy	Check flat cable installation to the CCD unit. Check CCD unit.
	11	Content	Shading trouble (white correction)
		Details	Improper CCD white reference plate reading level for copy lamp lighting
		Cause	Flat cable installation failure to CCD unit "Dirt on the mirror, lens, and reference white plate" Copy lamp operation error CCD unit abnormality MCU PWB abnormality (Occurred in the SPF scan position.)
		Check and remedy	"Clean the mirror, the lens, and the reference white plate." Check the copy lamp light quantity and its operation. (SIM 5-3) Check CCD unit. Check MCU PWB.

Trouble code		Details of trouble	
Main code	Sub code		
E7	12	Content	Shading trouble
		Details	White correction is not completed in the specified number of times.
		Cause	Flat cable installation failure to CCD unit "Dirt on the mirror, lens, and reference white plate" Copy lamp lighting trouble CCD unit abnormality MCU PWB abnormality
		Check and remedy	"Clean the mirror, the lens, and the reference white plate." Check the copy lamp light quantity and its operation. (SIM 5-3) Check CCD unit. Check MCU PWB.
F1	00	Content	Finisher communication trouble
		Details	Communication line test error occurs when power is turned on or after the exit of a simulation mode. Error in Finisher communication
		Cause	Connection trouble or disconnection of the connector and harness between the body and the finisher. Finisher control PWB trouble Control PWB failure Malfunction by noises
		Check and remedy	Turn off/of the power to cancel the trouble. Check connector/harness of communication line Replace the finisher control PWB.
	01	Content	Side guide plated home position error
		Details	The side guide plate cannot return to the home position.
		Cause	Side guide plate drive motor abnormality Side guide plate home position sensor abnormality
		Check and remedy	Use SIM3-3-1 to check the side guide plate motor operation.
	06	Content	Offset motor trouble
		Details	When the offset motor of the finisher is driven it does not reach the specified position.
		Cause	Offset motor abnormality Offset motor origin sensor abnormality Finisher PWB abnormality
		Check and remedy	Use SIM 3-3-6 to check the offset motor operation.
	08	Content	Staple motor error
		Details	The staple motor cannot return to the home position.
		Cause	Staple motor abnormality Staple motor home position sensor abnormality Staple unit abnormality
		Check and remedy	Use SIM 3-3-7 to check the staple motor operation.

Trouble code		Details of trouble	
Main code	Sub code		
F1	11	Content	Rear edge plate home position error
		Details	The rear edge plate cannot return to the home position.
		Cause	Rear edge plate drive motor abnormality Side guide plate home position sensor abnormality Finisher PWB abnormality
		Check and remedy	Use SIM 3-3-2 to check the rear edge plate motor operation.
	15	Content	Finisher lift-up motor trouble
		Details	The finisher lift-up motor does not reach the specified position.
		Cause	Lift-up motor abnormality Lift-up motor upper limit sensor abnormality Finisher PWB abnormality
		Check and remedy	Use SIM 3-3-5 to check the lift-up motor operation.
F2	02	Content	Toner supply failure
		Details	The value judged from the actual toner supply hysteresis differs greatly from the toner sensor value.
		Cause	Developing unit trouble Toner supply abnormality caused by installation of unpacked toner cartridge
		Check and remedy	Replace the developing unit Use SIM 25-1 to perform DV stirring.
	04	Content	Identification error
			Model error
			Type error
			Destination error
			Data abnormality
			Misc error
		Details	Identification error When the CRUM trademark differs. When the CRUM company code differs.
			Model error When the boot program model code does not match with the CRUM model information.
			Type error When the CRUM type is other than [Genuine/Conversion/Production rotation].
			Destination error The destination of the body differs from that of the CRUM.
			Data abnormality The initial check information includes an erroneous value. When the max. toner supply time is 00: When the print hard stop is 00:
		Cause	CRUM chip failure Erroneous developing unit
		Check and remedy	Replace the CRUM chip. Replace the developing unit

Trouble code		Details of trouble	
Main code	Sub code		
F5	02	Content	Copy lamp lighting abnormality
		Details	The copy lamp does not light up.
		Cause	Copy lamp error Copy lamp harness abnormality CCD PWB harness abnormality
		Check and remedy	Check the copy lamp (SIM 5-3) When the lamp lights: Check the harnesses and connectors between the CCD unit and the MCU PWB. When the lamp does not light: Check the harness and connector between the copy lamp and the MCU PWB. Replace the copy lamp unit. Replace the MCU PWB.
		Remarks	Copy lamp disconnection Cable is not attached.
F6	00	Content	F6-**: MCU-FAX communication trouble
		Details	Communication establishment error/ framing/parity/protocol error
		Cause	FAX control PWB connector disconnection Defective harness between FAX control PWB and MCU PWB Motherboard connector pin breakage FAX control PWB ROM error/Data error
		Check and remedy	Check connector/harness of FAX control PWB and MCU PWB. Check the grounding of the copier. Check FAX control PWB ROM.
	10	Content	FAX control PWB trouble
		Details	Communication trouble between MCU and FAX control PWB
		Cause	FAX control PWB connector disconnection Defective harness between FAX control PWB and MCU PWB Motherboard connector pin breakage FAX control PWB ROM error/Data error
		Check and remedy	Check connector/harness of FAX control PWB and MCU PWB. Check the grounding of the copier. Check FAX control PWB ROM.
	80	Content	FAX control PWB communication trouble (Protocol)
		Details	Communication trouble between MCU and FAX control PWB (Protocol error)
		Cause	FAX control PWB connector disconnection Defective harness between FAX control PWB and MCU PWB Motherboard connector pin breakage FAX control PWB ROM error/Data error
		Check and remedy	Check connector/harness of FAX control PWB and MCU PWB. Check the grounding of the copier. Check FAX control PWB ROM.

Trouble code		Details of trouble	
Main code	Sub code		
F6	81	Content	FAX control PWB communication trouble (Parity)
		Details	Communication trouble between MCU and FAX control PWB (Parity error)
		Cause	FAX control PWB connector disconnection Defective harness between FAX control PWB and MCU PWB Motherboard connector pin breakage FAX control PWB ROM error/Data error
		Check and remedy	Check connector/harness of FAX control PWB and MCU PWB. Check the grounding of the copier. Check FAX control PWB ROM.
	82	Content	FAX control PWB communication trouble (Over-run)
		Details	Communication trouble between MCU and FAX control PWB (Overrun error)
		Cause	FAX control PWB connector disconnection Defective harness between FAX control PWB and MCU PWB Motherboard connector pin breakage FAX control PWB ROM error/Data error
		Check and remedy	Check connector/harness of FAX control PWB and MCU PWB. Check the grounding of the copier. Check FAX control PWB ROM.
	84	Content	FAX control PWB communication trouble (Framing)
		Details	Communication trouble between MCU and FAX control PWB (Framing error)
		Cause	FAX control PWB connector disconnection Defective harness between FAX control PWB and MCU PWB Motherboard connector pin breakage FAX control PWB ROM error/Data error
		Check and remedy	Check connector/harness of FAX control PWB and MCU PWB. Check the grounding of the copier. Check FAX control PWB ROM.
	88	Content	FAX control PWB communication trouble (Timeout)
		Details	Communication trouble between MCU and FAX control PWB (Timeout error)
		Cause	FAX control PWB connector disconnection Defective harness between FAX control PWB and MCU PWB Motherboard connector pin breakage FAX control PWB ROM error/Data error
		Check and remedy	Check connector/harness of FAX control PWB and MCU PWB. Check the grounding of the copier. Check FAX control PWB ROM.
	99	Content	Machine-FAX board language error
		Details	The machine language setup does not coincide with the FAX board language setup.
		Cause	FAX board correction error SIM setup error
		Check and remedy	Check the firmware of the FAX board and the combination of the panel screen data, and download the correct version, if necessary. Check the machine language information. (Machine language setup: SIM 26-22)

Trouble code		Details of trouble	
Main code	Sub code		
F9	00	Content	F9-**: MCU-PRT communication trouble
		Details	Communication establishment error/ framing/parity/protocol error
		Cause	Printer PWB connector disconnection Harness trouble between the printer PWB and the MCU PWB Motherboard connector pin breakage Printer PWB ROM trouble/Data disturbance
		Check and remedy	Check the connectors and harness of the printer PWB and MCU PWB. Check the grounding of the copier. Check ROM on printer PWB.
	10	Content	Printer PWB trouble
		Details	Communication trouble between MCU and printer PWB
		Cause	Printer PWB connector disconnection Harness trouble between the printer PWB and the MCU PWB Motherboard connector pin breakage Printer PWB ROM trouble/Data disturbance
		Check and remedy	Check the connectors and harness of the printer PWB and MCU PWB. Check the grounding of the copier. Check ROM on printer PWB.
	80	Content	Printer PWB communication trouble (Protocol)
		Details	Communication trouble between MCU and printer PWB (Protocol error)
		Cause	Printer PWB connector disconnection Harness trouble between the printer PWB and the MCU PWB Motherboard connector pin breakage Printer PWB ROM trouble/Data disturbance
		Check and remedy	Check the connectors and harness of the printer PWB and MCU PWB. Check the grounding of the copier. Check ROM on printer PWB.
	81	Content	Printer PWB communication trouble (Parity)
		Details	Communication trouble between MCU and printer PWB (Parity error)
		Cause	Printer PWB connector disconnection Harness trouble between the printer PWB and the MCU PWB Motherboard connector pin breakage Printer PWB ROM trouble/Data disturbance
		Check and remedy	Check the connectors and harness of the printer PWB and MCU PWB. Check the grounding of the copier. Check ROM on printer PWB.

Trouble code		Details of trouble	
Main code	Sub code		
F9	82	Content	Printer PWB communication trouble (Overrun)
		Details	Communication trouble between MCU and printer PWB (Overrun error)
		Cause	Printer PWB connector disconnection Harness trouble between the printer PWB and the MCU PWB Motherboard connector pin breakage Printer PWB ROM trouble/Data disturbance
		Check and remedy	Check the connectors and harness of the printer PWB and MCU PWB. Check the grounding of the copier. Check ROM on printer PWB.
	84	Content	Printer PWB communication trouble (Framing)
		Details	Communication trouble between MCU and printer PWB (Framing error)
		Cause	Printer PWB connector disconnection Harness trouble between the printer PWB and the MCU PWB Motherboard connector pin breakage Printer PWB ROM trouble/Data disturbance
		Check and remedy	Check the connectors and harness of the printer PWB and MCU PWB. Check the grounding of the copier. Check ROM on printer PWB.
	88	Content	Printer PWB communication trouble (Timeout)
		Details	Communication trouble between MCU and printer PWB (Timeout error)
		Cause	Printer PWB connector disconnection Harness trouble between the printer PWB and the MCU PWB Motherboard connector pin breakage Printer PWB ROM trouble/Data disturbance
		Check and remedy	Check the connectors and harness of the printer PWB and MCU PWB. Check the grounding of the copier. Check ROM on printer PWB.
	99	Content	Machine-PCL board language error
		Details	The machine language setup does not coincide with the PCL board language setup.
		Cause	PCL board connection error SIM setup error
		Check and remedy	Check the firmware of the PCL board and the combination of the panel screen data, and download the correct version, if necessary. Check the machine language information. (Machine language setup: SIM 26-22)
H2	00	Content	Thermistor open detection
		Details	Thermistor open detection Fusing unit not installed
		Cause	Thermistor defect Control PWB failure Fusing section connector contact failure Fusing unit not installed
		Check and remedy	Check the harness and the connector of the thermistor and the MCU. Clear the display of self-diagnostics with SIM 14.
		Remarks	Thermistor open

Trouble code		Details of trouble	
Main code	Sub code		
H3	00	Content	Heat roller abnormally high temperature
		Details	The fusing temperature is over 220°C.
		Cause	Thermistor defect Control PWB failure Fusing section connector contact failure
		Check and remedy	Check the heater lamp blinking with SIM 5-2. When the lamp blinks normally: Check the thermistor and the harness. Check the MCU PWB thermistor input circuit. If lamp lights and stays lit: Check the power PWB and the MCU PWB lamp control circuit. Clear the display of self-diagnostics with SIM 14.
H4	00	Content	Heat roller abnormally low temperature
		Details	The setup temperature (about 90°C is not reached within the specified time (about 35sec) from turning on the power ON SW. (When the temperature falls below 120°C in the standby mode.)
		Cause	Thermistor defect Heater lamp failure Thermostat failure Control PWB failure
		Check and remedy	Check the heater lamp blinking with SIM 5-2. When the lamp blinks normally: Check the thermistor and the harness. Check the MCU PWB thermistor input circuit. When the lamp does not light: Check for disconnection of the heater lamp and thermostat. Check the interlock switch. Check the power PWB and the MCU PWB lamp control circuit. Clear the display of self-diagnostics with SIM 14.
H5	01	Content	5 continuous T10D(T20D) not-reaching JAM
		Details	T10D(T20D) not-reaching JAM was detected 5 continuous times.
		Cause	The fusing JAM is not completely removed. (Jam paper remains.) T10D or T20D sensor breakdown or harness connection trouble Fusing unit installation failure
		Check and remedy	Check for jam paper in the fusing section. (paper winding, etc.) Check fusing unit installation Clear the trouble with SIM 14.
	02	Content	Fusing thermistor abnormality detect
		Details	Fusing thermistor temperature transient abnormality (Paper winding)
		Cause	Paper wound around the fusing roller. Fusing pawl abnormality Fusing unit installation failure
		Check and remedy	Check for jam paper in the fusing section. (paper winding, etc.) Check installation of the fusing unit. Check the fusing pawl. Clear the trouble with SIM 14.

Trouble code		Details of trouble	
Main code	Sub code		
L1	00	Content	Scanner feed trouble
		Details	Scanner feed is not completed within the specified time.
		Cause	Mirror unit defect Scanner wire disconnection Origin detection sensor error Mirror motor harness abnormality
		Check and remedy	Check the scanning operation with SIM 1-1. Mirror base feed trouble Check for disconnection of the scanner wire. Check the harness and connector between the mirror motor and the MCU PWB. Replace the mirror unit. Replace the MCU PWB. When the mirror feeds: Check the mirror home position sensor with SiM 1-2.
L3	00	Content	Scanner return trouble
		Details	Scanner return is not completed within the specified time. "When OC copying with the mirror at the home position, the mirror is not in the home position. "
		Cause	Mirror unit defect The scanner wire is disconnected. Origin detection sensor error Mirror motor harness abnormality
		Check and remedy	Check the scanning operation with SIM 1-1. Mirror base return trouble Check for disconnection of the scanner wire. Check the harness and connector between the mirror motor and the MCU PWB. Replace the mirror unit. Replace the MCU PWB. When the mirror feeds: Check the mirror home position sensor with SiM 1-2.
L4	01	Content	Main motor lock
		Details	The main motor does not rotate. The motor lock signal is detected for 1sec or more after the main motor rotates. The motor lock signal is detected for 1sec during rotation of the main motor.
		Cause	Main motor defect Main motor connection harness trouble or disconnection MCU PWB failure
		Check and remedy	Check the main motor operation with SIM 25-1. Check connection of the main motor harness and connector. Replace the main motor. Replace the MCU PWB.

Trouble code		Details of trouble	
Main code	Sub code		
L4	11	Content	Shifter motor trouble
		Details	The shifter home position detection signal is not detected when the shifter is operating.
		Cause	Shifter motor trouble or harness connection trouble and disconnection Shifter home position sensor trouble
		Check and remedy	Check the shift motor operation with SIM 3-11. Check connection of the shifter motor harness/connector. Replace the shifter motor. Replace the MCU PWB.
L6	10	Content	Polygon motor lock trouble
		Details	The polygon motor does not rotate. The motor lock signal is detected for 6sec or more after the polygon motor rotates. The motor lock signal is detected for 1sec during rotation of the polygon motor.
		Cause	Polygon motor unit failure Polygon motor connection harness trouble or disconnection MCU PWB failure
		Check and remedy	Check the polygon motor operation with SIM 61-1. Check connector/harness of polygon motor Replace the polygon motor. Replace the MCU PWB.
L8	01	Content	Zero cross detection error
		Details	The zero cross signal is not detected.
		Cause	Power failure MCU PWB abnormality
		Check and remedy	Check connection of the harness and connector. Replace the MCU PWB. Power unit replacement
U2	04	Content	EEPROM communication error
		Details	MCU PWB EEPROM access circuit failure
		Cause	EEPROM defective ICU PWB EEPROM access circuit failure
		Check and remedy	Check that the EEPROM is properly set. Clear trouble with SIM 16. Replace the MCU PWB.
		Remarks	EEPROM abnormality
	11	Content	Counter check sum error
		Details	Counter check sum value stored in the EEPROM is abnormal.
		Cause	EEPROM defective ICU PWB EEPROM access circuit failure
		Check and remedy	Check that the EEPROM is properly set. Clear trouble with SIM 16. Replace the MCU PWB.
		Remarks	Checksum error in counter data area
	12	Content	Adjustment value check sum error
		Details	Adjustment value check sum error (EEPROM)
		Cause	EEPROM defective ICU PWB EEPROM access circuit failure
		Check and remedy	Check that the EEPROM is properly set. Clear trouble with SIM 16. Replace the MCU PWB.
		Remarks	Checksum error in adjustment value data area

Trouble code		Details of trouble	
Main code	Sub code		
U2	20	Content	Machine speed code data error
		Details	The machine information is not identical to the model code speed information.
		Cause	EEPROM defective SIM operation error
		Check and remedy	Check that the machine set with SIM 26-57 is identical to the model information.
		Remarks	When the boot program speed code does not match with the body model information.
	40	Content	CRUM chip communication error
		Details	Error in MCU-CRUM chip communication
		Cause	CRUM chip failure Developing unit contact trouble MCU PWB failure
		Check and remedy	Replace the CRUM chip. Check installation of the developing unit. Clear the trouble with SIM 16. Replace the MCU PWB.
		Remarks	CRUM communication error
U7	00	Content	RIC communication trouble
		Details	Error in communication with RIC Error in communication test after turning on the power or canceling SIM.
		Cause	Connector harness contact trouble or disconnection RIC control PWB trouble MCU PWB failure Malfunction by noises
		Check and remedy	check the communication cable connectors from the RIC box to the main body.
U9	00	Content	U9-**: MCU-OPE communication trouble
		Details	Communication establishment error/ framing/parity/protocol error
		Cause	Operation control PWB connector disconnection Operation control PWB MCU PWB harness failure
		Check and remedy	Check the connectors and harness of the operation control PWB and MCU PWB. Check the grounding of the copier. Check ROM on the operation control PWB.
	80	Content	Operation control PWB communication trouble (Protocol)
		Details	Communication trouble between MCU and the operation control PWB (Protocol error)
		Cause	Operation control PWB connector disconnection Operation control PWB MCU PWB harness failure
		Check and remedy	Check the connectors and harness of the operation control PWB and MCU PWB. Check the grounding of the copier.

Trouble code		Details of trouble	
Main code	Sub code		
U9	81	Content	Operation control PWB communication trouble (Parity)
		Details	Communication trouble between MCU and the operation control PWB (Parity error)
		Cause	Operation control PWB connector disconnection Operation control PWB MCU PWB harness failure
		Check and remedy	Check the connectors and harness of the operation control PWB and MCU PWB. Check the grounding of the copier.
	82	Content	Operation control PWB communication trouble (Overrun)
		Details	Communication trouble between MCU and the operation control PWB (Overrun error)
		Cause	Operation control PWB connector disconnection Operation control PWB MCU PWB harness failure
		Check and remedy	Check the connectors and harness of the operation control PWB and MCU PWB. Check the grounding of the copier.
	84	Content	Operation control PWB communication trouble (Framing)
		Details	Communication trouble between MCU and the operation control PWB (Framing error)
		Cause	Operation control PWB connector disconnection Operation control PWB MCU PWB harness failure
		Check and remedy	Check the connectors and harness of the operation control PWB and MCU PWB. Check the grounding of the copier.
	88	Content	Operation control PWB communication trouble (Time-out)
		Details	Communication trouble between MCU and the operation PWB (Time-out error)
		Cause	Operation control PWB connector disconnection Operation control PWB MCU PWB harness failure
		Check and remedy	Check the connectors and harness of the operation control PWB and MCU PWB. Check the grounding of the copier.
	99	Content	Operation panel destination error
		Details	An error occurred in checking the operation panel and the destination of the body.
		Cause	Erroneous connection the operation panel unit SIM setup error
		Check and remedy	Check the destination information of the operation panel unit and the MCU. (Use SIM 26-22 for the destination of the body.)
CE	00	Content	The other communication error has occurred.
		Detail	Communication error
		Cause	Network Cable connection failure
		Check and remedy	1) Check that the Network Cable is properly inserted.

Trouble code		Details of trouble	
Main code	Sub code		
CE	01	Content	The print server card (AR-NC3D) is not installed or defective.
		Detail	NC3D connection failure
		Cause	NC-3D is not installed to the AR-PB2A board. NC-3D control PWB trouble
		Check and remedy	1) Check that the NC-3D is installed to the AR-PB2A board. 2) Output the NIC Config. Page to check the NIC version. 3) Replace the NIC.
	02	Content	The specified mail server or the FTP server is not found.
		Detail	The specified mail server or the FTP server is not found.
		Cause	Network Cable connection failure Network setup failure SMTP server/FTP server/NST trouble
		Check and remedy	1) Check that the Network Cable is inserted properly. 2) Check that the connected network supports TCP/IP protocol. 3) Check from the Web Page that the Primary/Secondary E-mail Server Address or the Destination FTP server/ Desktop PC address are properly set. 4) If the above address is described with Hostname, check that the DNS server is properly set. 5) Check that the SMTP server/FTP server/NST causes a trouble or not.
	03	Content	The specified server does not correspond during image transmission.
		Detail	The specified server does not correspond during image transmission.
		Cause	Network Cable connection failure
			SMTP server/FTP server/NST trouble
		Check and remedy	1) Check that the Network Cable is inserted properly. 2) Check that the SMTP server/FTP server/NST causes a trouble or not.
	04	Content	The entered account name of the FTP server or the password is invalid.
		Detail	The entered account name of the FTP server or the password is invalid.
		Cause	Network Cable connection failure
			The account name of the FTP server recorded as the destination or the password for the account name is erroneous.
		Check and remedy	1) Check that the Network Cable is inserted properly. 2) Check that the account name of the FTP server recorded as the destination and the password for the account name are proper.

Trouble code		Details of trouble	
Main code	Sub code		
CE	05	Content	The entered directory of the FTP server is invalid.
		Detail	The entered directory of the FTP server is invalid.
		Cause	Network Cable connection failure Check that the directory name exists in the FTP server recorded as the destination.
		Check and remedy	1) Check that the Network Cable is inserted properly. 2) Check that the directory name exists in the FTP server recorded as the destination.
EE	EL	Content	Developer adjustment trouble (Over-toner abnormality)
		Details	An abnormality occurred in execution of automatic developer adjustment. Sample data over-toner was detected.
		Cause	Toner concentration sensor abnormality Toner concentration trouble Developing unit trouble MCU PWB failure
		Check and remedy	Use SIM 25-2 to perform the auto developer adjustment.
	EU	Content	Developer adjustment trouble (Under-toner abnormality)
		Details	An abnormality occurred in execution of automatic developer adjustment. Sample data under-toner was detected.
		Cause	Toner concentration sensor abnormality Toner concentration trouble Developing unit trouble MCU PWB failure
		Check and remedy	Use SIM 25-2 to perform the auto developer adjustment.
PF	00	Content	RIC copy inhibit signal received
		Details	The copy inhibit command from RIC is received.
		Cause	Judged by the host.
		Check and remedy	Information the host.

[10] DISASSEMBLY, ASSEMBLY AND MAINTENANCE

1. Maintenance table

N: Check (Check, clean, replace or adjust according to necessity.)

Y: Cleaning R: Replace L: Lubricate

Unit	Parts	50k	100k	150k	200k	250k	300k	Note
Process unit	Drum	R	R	R	R	R	R	
	Cleaning blade	R	R	R	R	R	R	
	Drum frame unit	N	N	N	R	N	N	
	Seal F/R	N	N	N	N	N	N	
	MC unit	R	R	R	R	R	R	Unit supply only (Individual parts in the unit can not be supplied.)
	Separation pawl unit	N	R	N	R	N	R	Unit supply only (Individual parts in the unit can not be supplied.)
DV unit	Developer	R	R	R	R	R	R	
	DV seal	N	N	N	N	N	N	
	Side seal (F/R)	N	N	N	N	N	N	
Fusing unit	Upper heat roller	Y	Y	R	Y	Y	R	
	Lower heat roller	Y	Y	Y	Y	Y	R	
	Upper separation pawl	Y	Y	R	Y	Y	R	
	Lower separation pawl	Y	Y	Y	Y	Y	R	
	Thermistor	Y	Y	Y	Y	Y	Y	
	Upper heat roller gear	L	L	R	L	L	R	
	Upper heat roller bush	N	N	R	N	N	R	
	Lower heat roller bearing	N	N	N	N	N	R	
	Paper guide	Y	Y	Y	Y	Y	Y	
Paper feed	Pickup roller (Multi bypass tray)	N	N	N	N	N	N	Changing criteria for parts: 50k
	Separation sheet (Multi bypass tray)	N	N	N	N	N	N	Changing criteria for parts: 50k
	Separation roller (Multi bypass tray)	N	N	N	N	N	N	Changing criteria for parts: 50k
	Pickup roller (500 sheets tray)	N	N	N	N	N	N	Changing criteria for parts: 50k
	Separation sheet (500 sheets tray)	N	N	N	N	N	N	Changing criteria for parts: 50k
	Separation roller (500 sheets tray)	N	N	N	N	N	N	Changing criteria for parts: 50k
Transport roller unit	Transport roller unit	Y	R	Y	R	Y	R	Unit supply only (Individual parts in the unit can not be supplied.)
Ozone filter	Ozone filter	R	R	R	R	R	R	
Others	Paper feed rollers	Y	Y	Y	Y	Y	Y	
	Gears	L	L	L	L	L	L	
LSU	Dust-proof glass	N	N	N	N	N	N	Clean only the outer surface of the glass with the developing CRU disassembled (with the LSU attached to the machine).

2. Counter clear

Item	SIM	Remarks
Maintenance cycle setting	SIM 21-1	
Jam/trouble counter clear	SIM 24-1	
Paper feed counter clear	SIM 24-2	At maintenance
DF/Scan/Stapler counter clear	SIM 24-3	At maintenance
Maintenance counter clear	SIM 24-4	At drum replacement
Developing counter clear	SIM 24-5	At developer replacement
Copy counter clear	SIM 24-6	
Drum counter clear	SIM 24-7	At drum replacement
Printer, other counter clear	SIM 24-9	
FAX related counter clear	SIM 24-14	
Scanner mode counter clear	SIM 24-15	

3. List of disassembly and assembly

Unit	Parts	
A. Process unit	(1) Drum	
	(2) Drum section	a. Main charger
		b. Cleaning blade
		c. Drum frame unit
		d. Moquette F/R
		e. Separation pawl

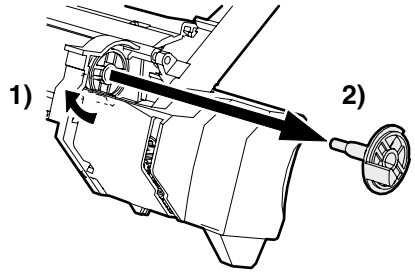
Unit	Parts	
B. Developing unit	(1) Developer	
	(2) DV seal/side seal	
C. Fusing unit	(1) Upper heat roller	
	(2) Lower heat roller	
	(3) Fusing Separation Pawl (upper)	
	(4) Fusing Separation Pawl (lower)	
	(5) Thermistor	
	(6) Upper heat roller gear	
	(7) Upper heat roller bearing	
	(8) Lower heat roller bearing	
	(9) Paper guide	
D. Paper feed	(1) Multi manual paper feed	a. Paper feed roller/pickup roller
		b. Separation sheet
	(2) Upper 500 sheets tray paper feed	a. Paper feed roller
		b. Pickup roller
		c. Separation sheet
	(3) Lower 500 sheets tray paper feed	a. Paper feed roller
		b. Pickup roller
		c. Separation sheet
E. Side door unit	(1) Transport roller unit	
F. 1st paper exit unit	(1) Paper exit roller	
G. Laser unit	(1) LSU	

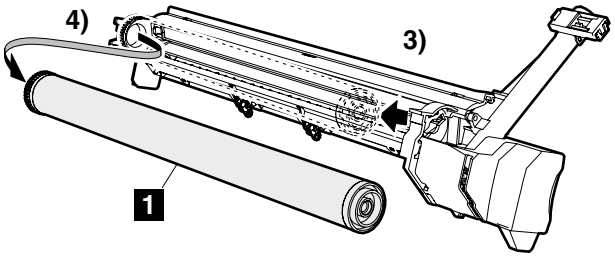
Unit	Parts
H. Power unit	(1) Power source
I. PWB	(1) Option CN PWB
	(2) IMC PWB
	(3) MCU PWB
	(4) Motherboard PWB
	(5) Second interface PWB
J. Others	Ozone filter

4. Details

A. Process unit

(1) Drum

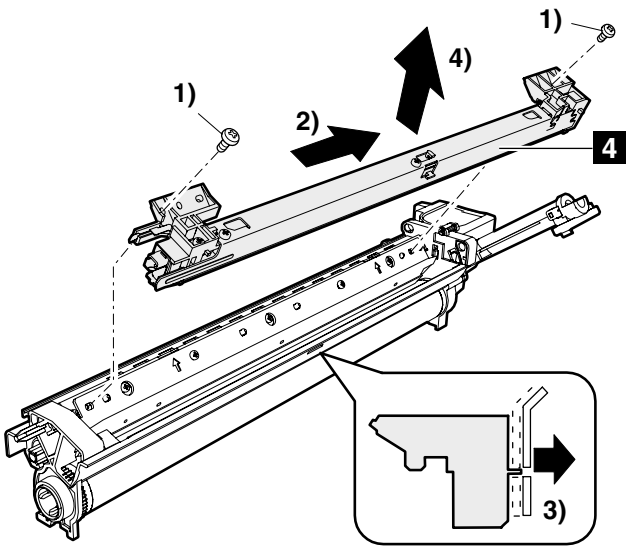




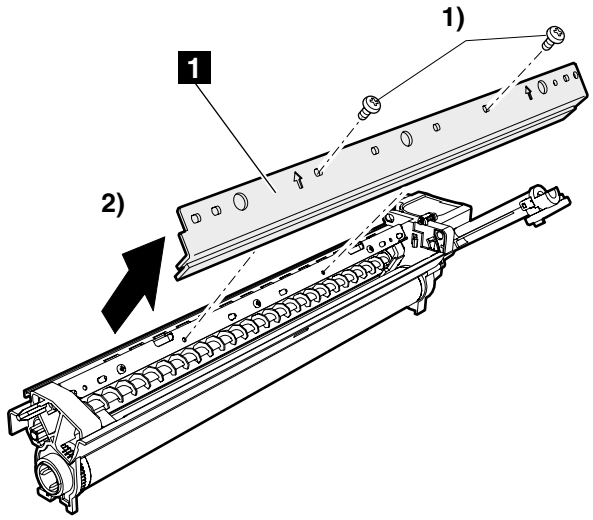
No.	Part name	Service items	Cycle	Remarks
1	Drum	Replace	50k	

(2) Drum section

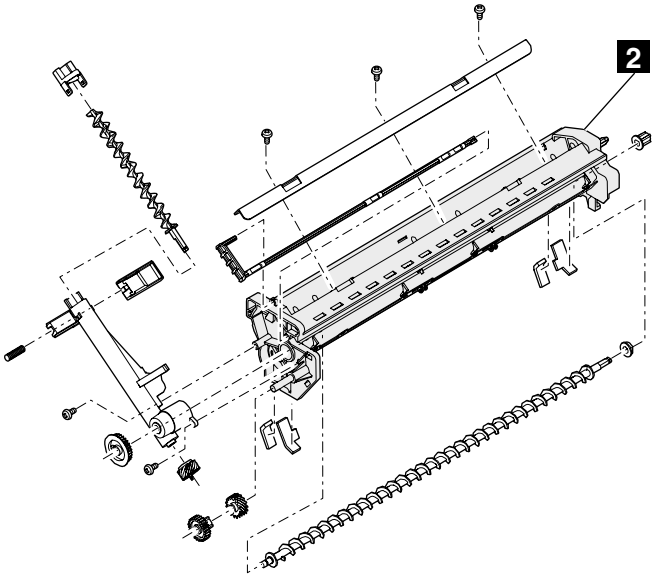
a. Main charger



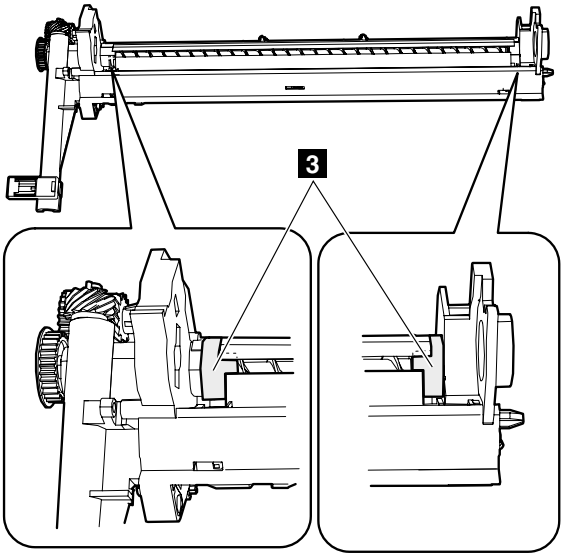
b. Cleaning blade



c. Drum frame unit



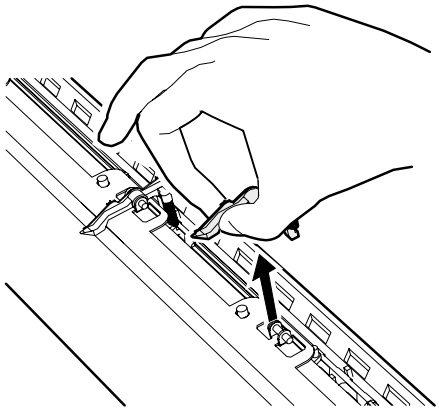
d. Moquette F/R



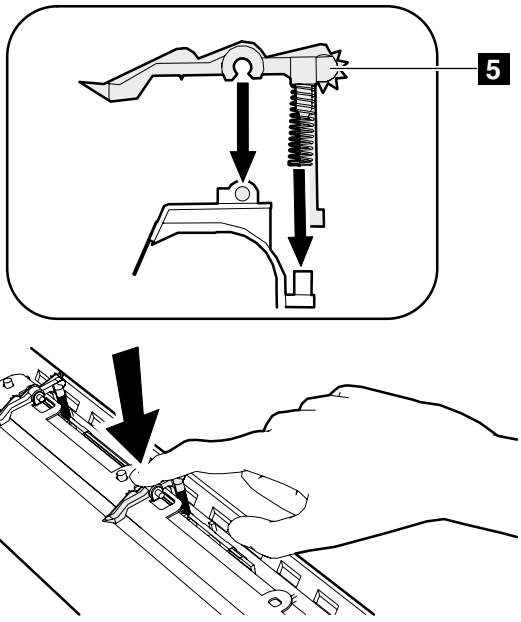
Note: If it disturbs the blade movement, replace it and attach new one.

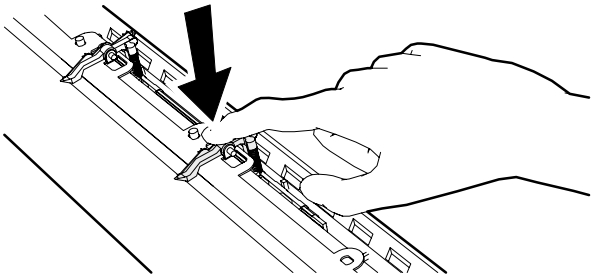
e. Separation pawl

Disassembly * Hold the tip of the separation pawl and remove it.



Assembly* Press the center of the separation pawl and install it.

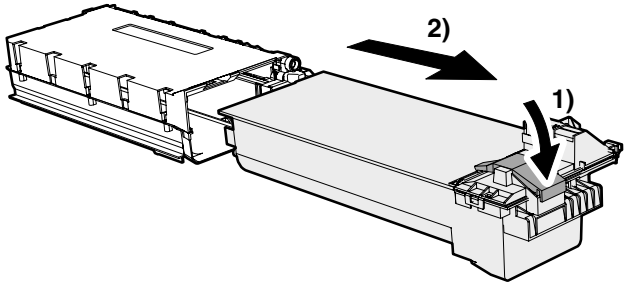


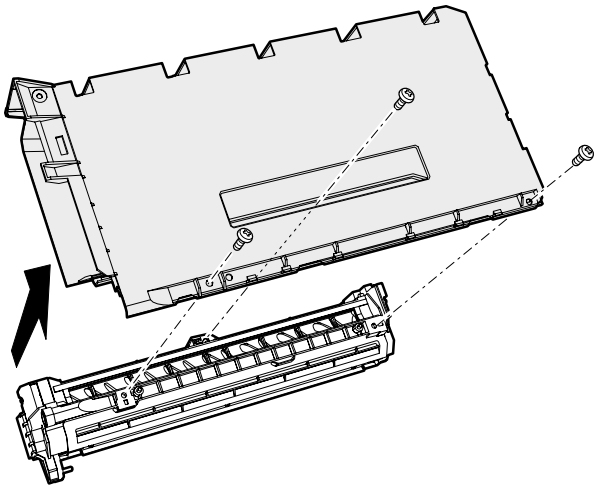


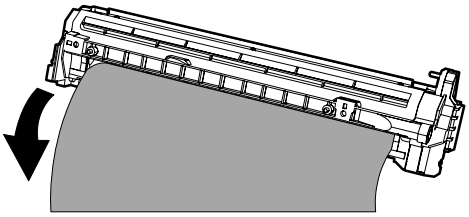
No.	Part name	Service items	Cycle	Remarks
1	Cleaning blade	Replace	50k	
2	Drum frame unit	Check	50k	
		Replace	200k	
3	Moquette F/R	Check	50k	
4	MC unit	Replace	50k	Unit supply only (Individual parts in the unit can not be supplied.)
5	Separation pawl unit	Check	50k	Unit supply only (Individual parts in the unit can not be supplied.)
		Replace	100k	

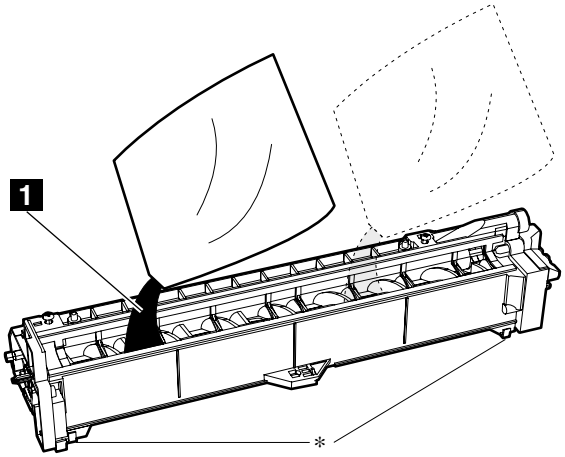
B. Developing section

(1) Developer



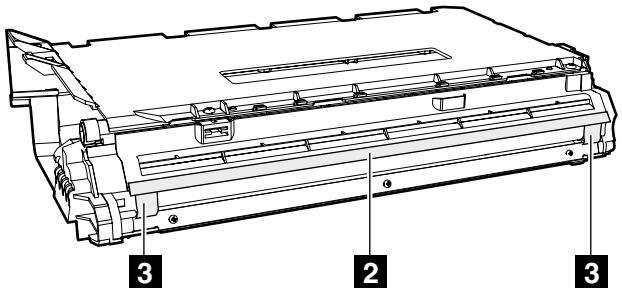






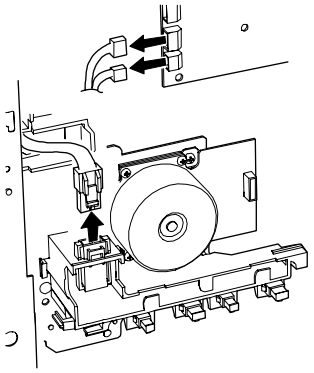
* When assembling, check that the hook is securely engaged in two positions.

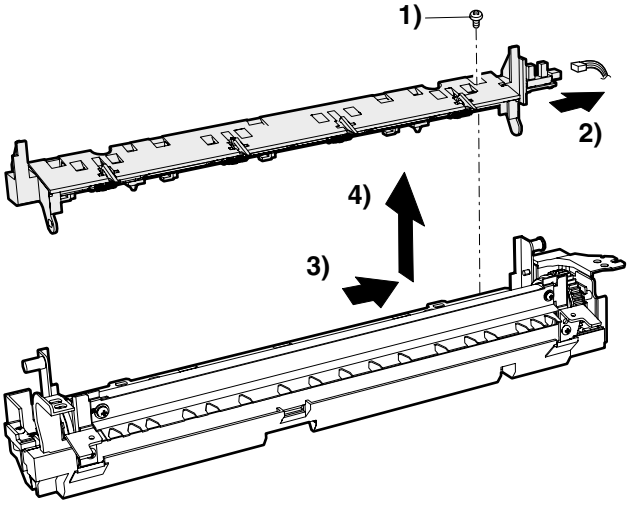
(2) DV seal/side seal

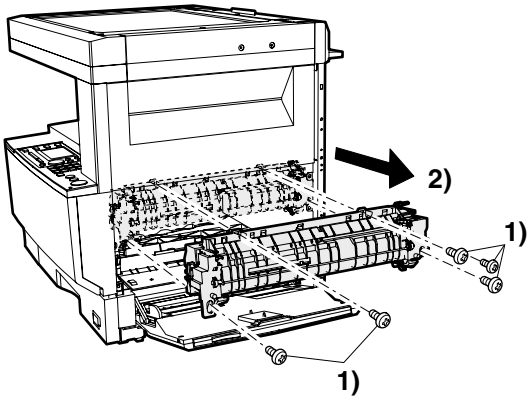


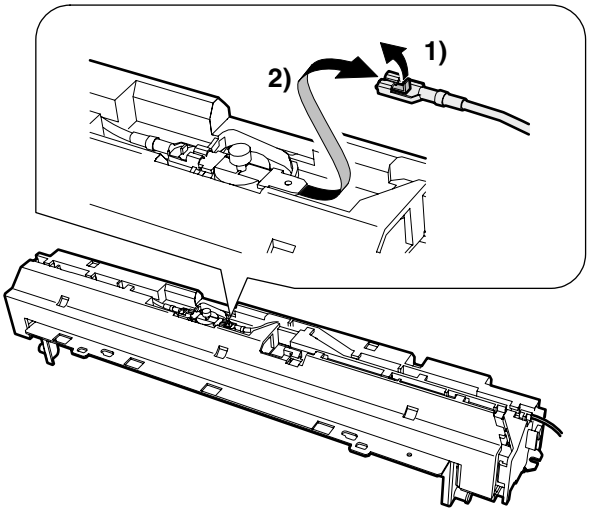
No.	Part name	Service items	Cycle	Remarks
1	Developer	Replace	50k	
2	DV seal	Check	50k	
3	DV side seal (F/R)	Check	50k	

C. Fusing section

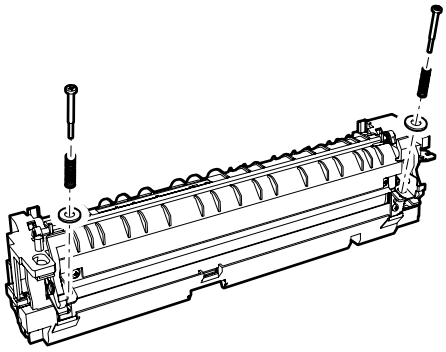


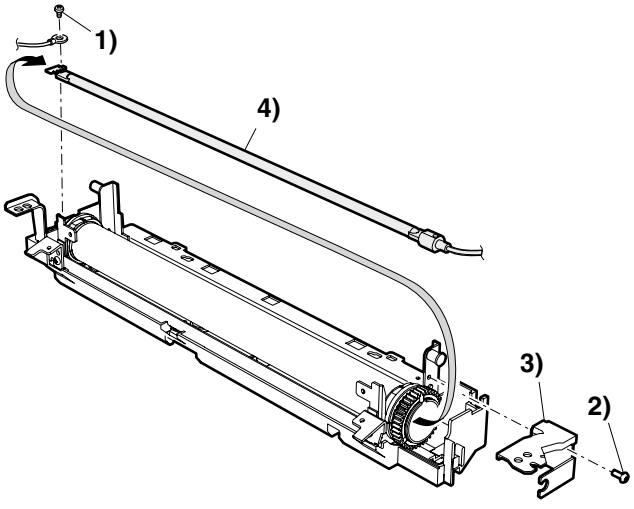


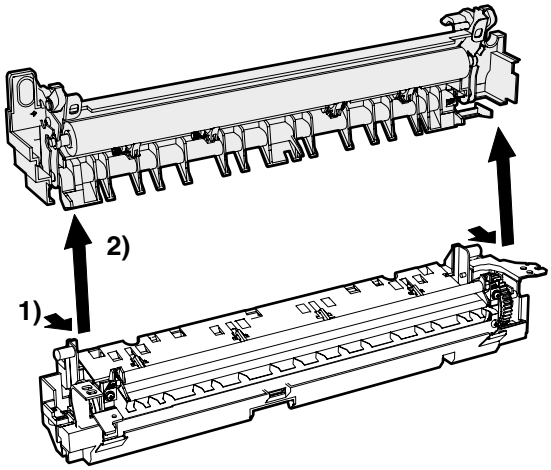


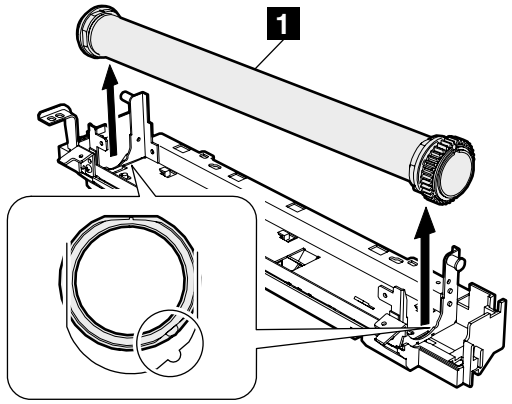


(1) Upper heat roller

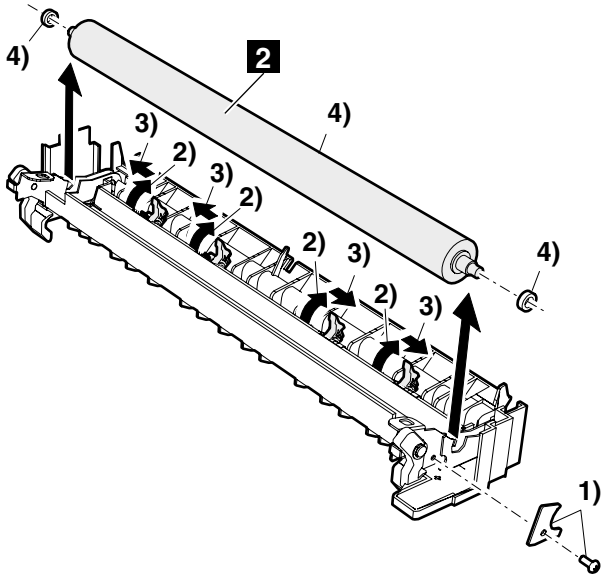




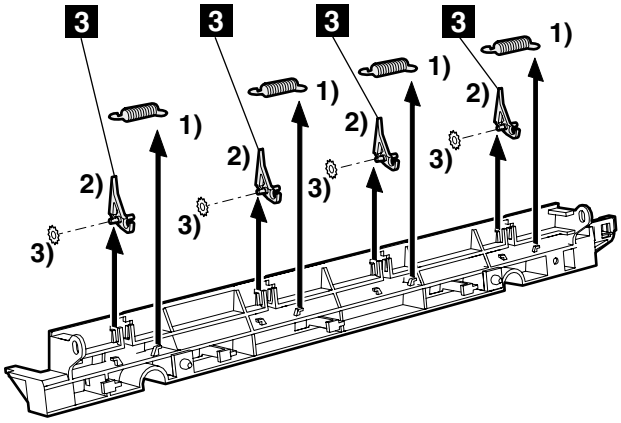




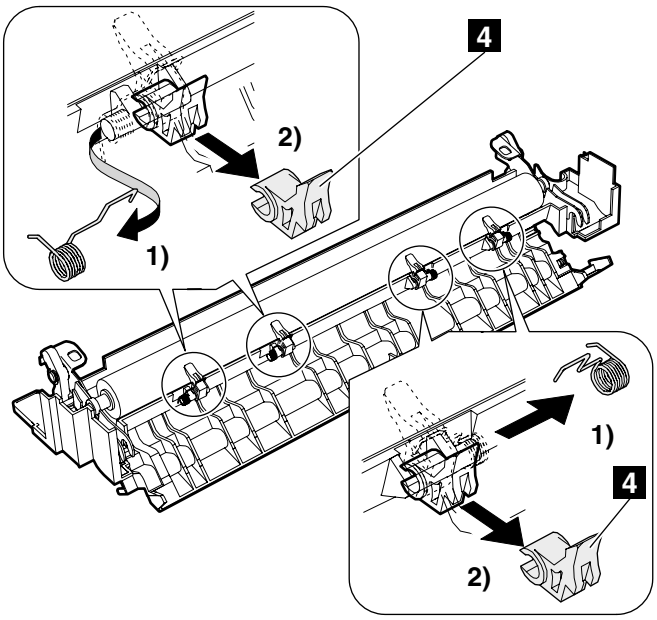
(2) Lower heat roller



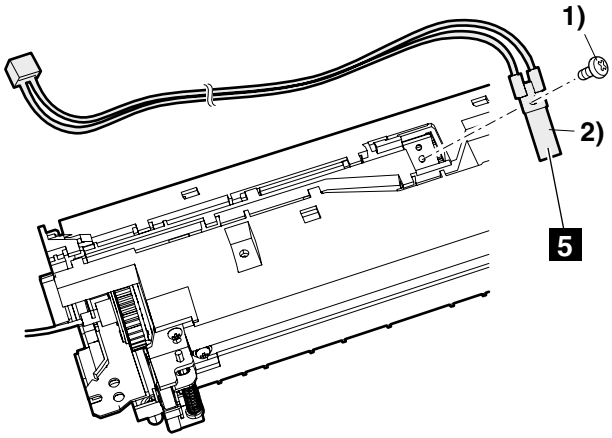
(3) Fusing Separation Pawl (upper)



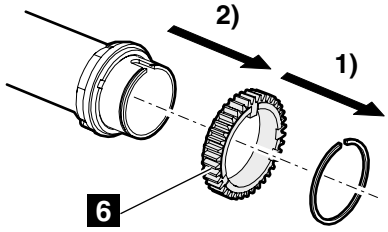
(4) Fusing Separation Pawl (lower)



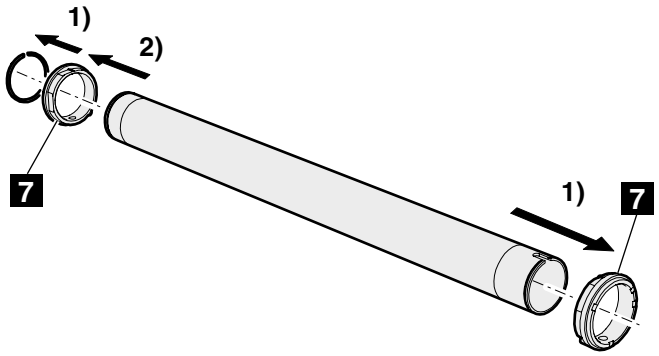
(5) Thermistor



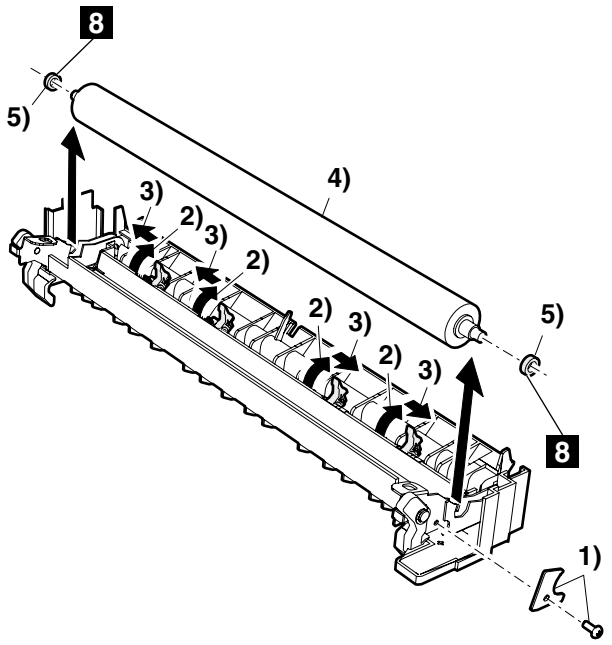
(6) Upper heat roller gear



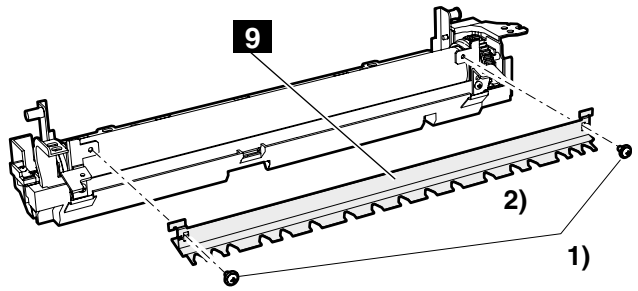
(7) Upper heat roller bearing



(8) Lower heat roller bearing

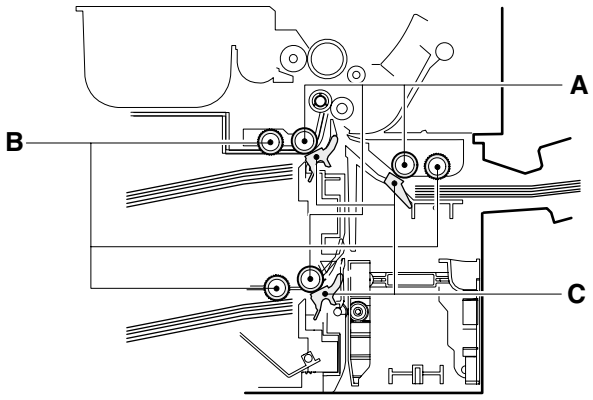


(9) Paper guide



No.	Part name	Service items	Cycle	Remarks
1	Upper heat roller	Cleaning	50k	
		Replace	150k	
2	Lower heat roller	Cleaning	50k	
		Replace	300k	
3	Upper separation pawl	Cleaning	50k	
		Replace	150k	
4	Lower separation pawl	Cleaning	50k	
		Replace	300k	
5	Thermistor	Cleaning	50k	
6	Upper heat roller gear	Lubricate	50k	
		Replace	150k	
7	Upper heat roller bearing	Check	50k	
		Replace	150k	
8	Lower heat roller bearing	Check	50k	
		Replace	300k	
9	Paper guide	Cleaning	50k	

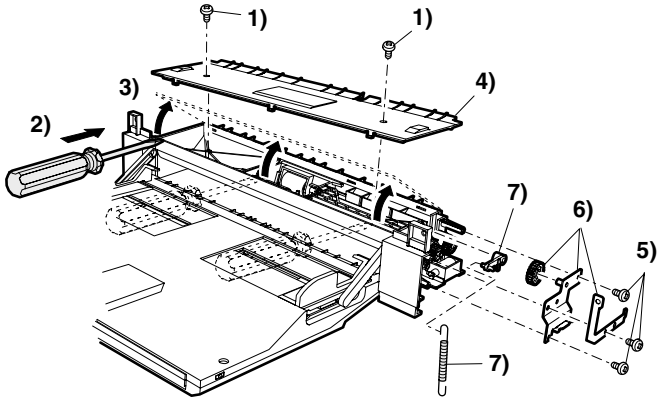
D. Paper feed section



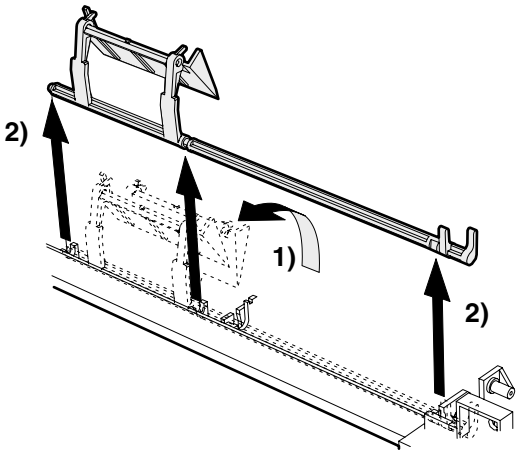
A	Paper feed roller
B	Pickup roller
C	Separation sheet

(1) Multi manual paper feed

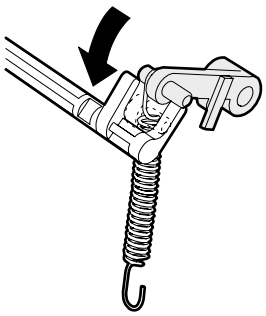
a. Paper feed roller/pickup roller

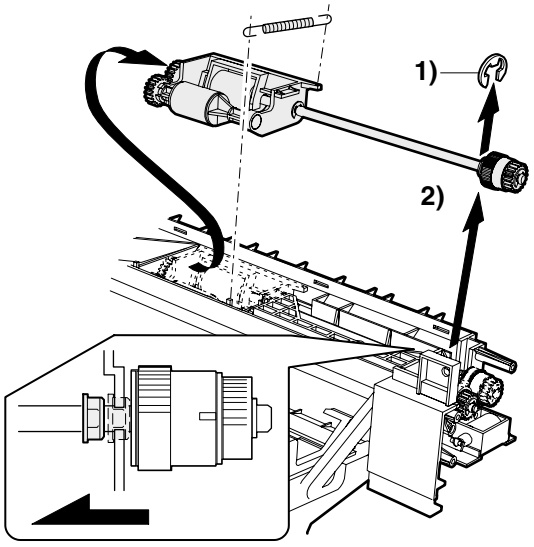


Removal*Raise the shutter arm before its removal.

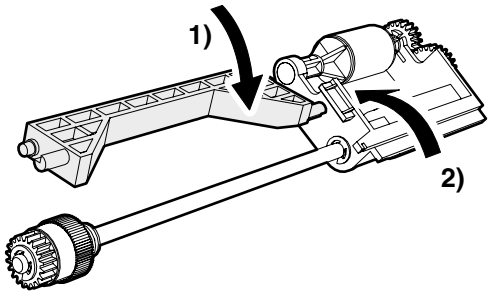


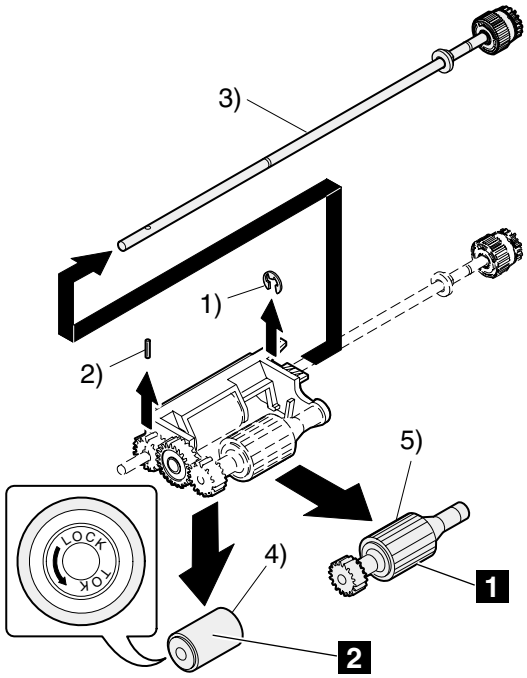
Installation*Install so that the boss of the lever arm comes into the rib of the shutter arm.



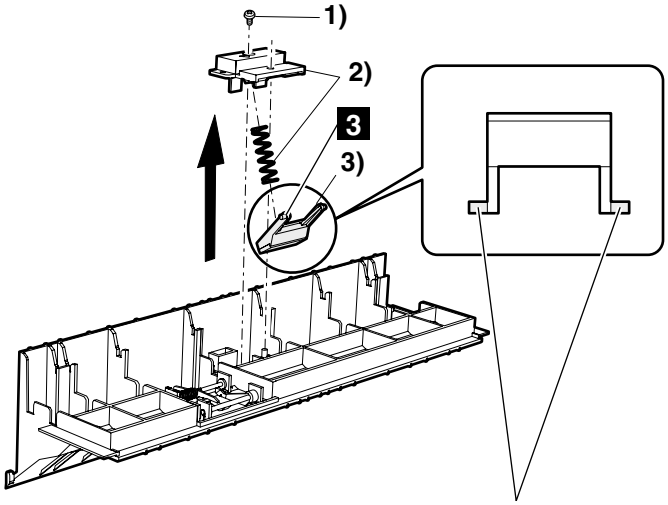


Installation*Install so that the cam transmit arm (1) comes under the roller arm (2).





b. Separation sheet

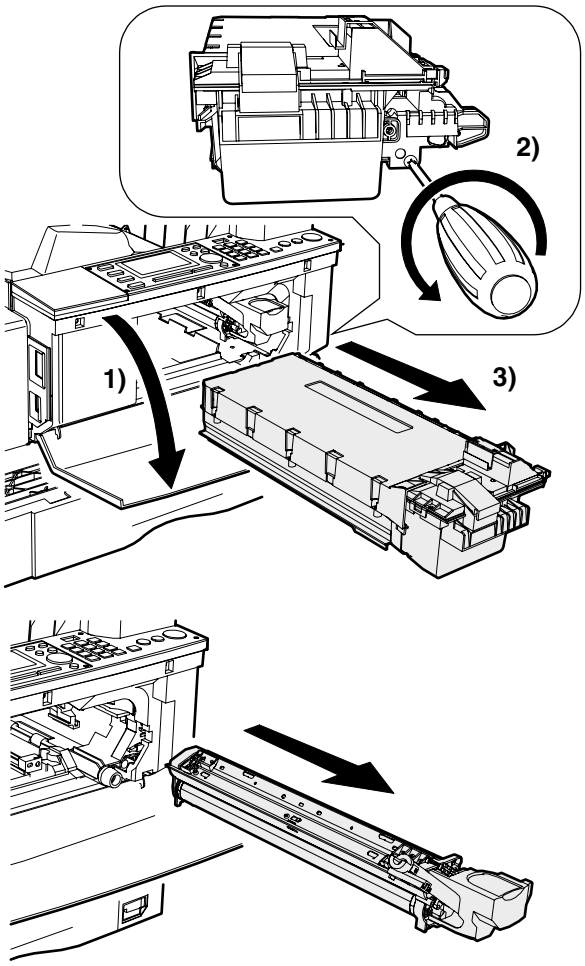


* Slightly apply grease GP501MR (UKOG-0012QSZZ) around the axis. One rice grain for each.

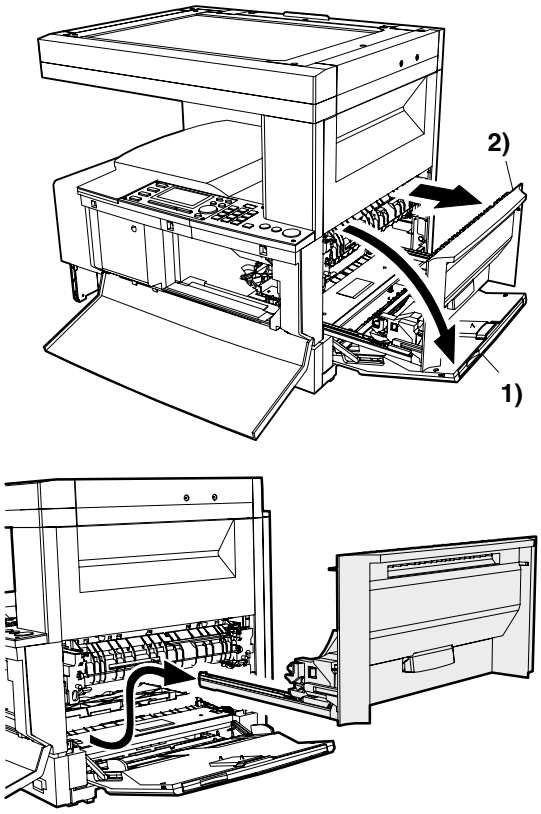
No.	Part name	Service items	Cycle	Remarks
1	Pickup roller (Multi bypass tray)	Check	50k	Changing criteria for parts: 50k
2	Separation roller (Multi bypass tray)	Check	50k	Changing criteria for parts: 50k
3	Separation sheet (Multi bypass tray)	Check	50k	Changing criteria for parts: 50k

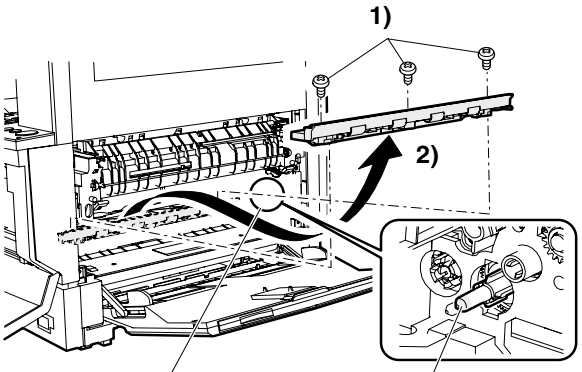
(2) Upper 500 sheets tray paper feed

a. Paper feed roller/pickup roller



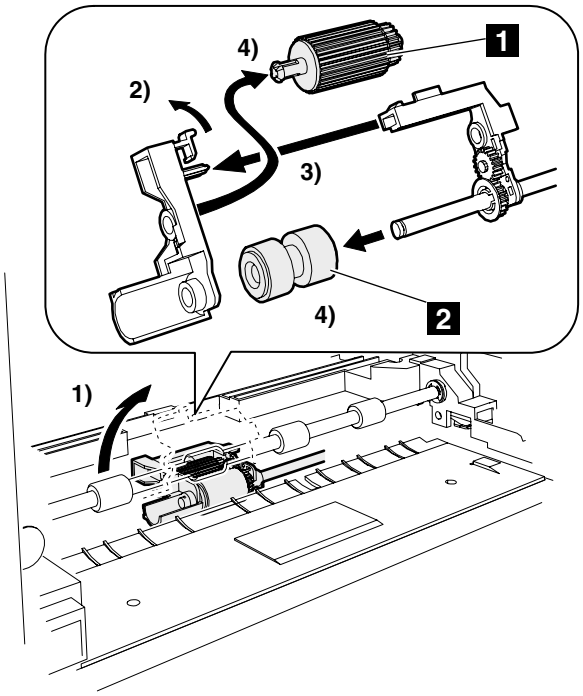
Note: With the toner cartridge installed, do not tilt or shake the developer cartridge.



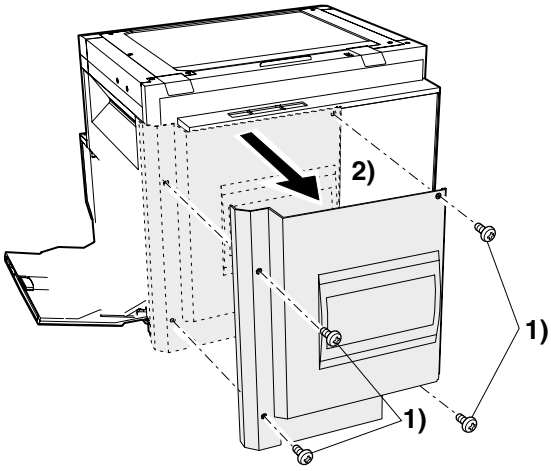


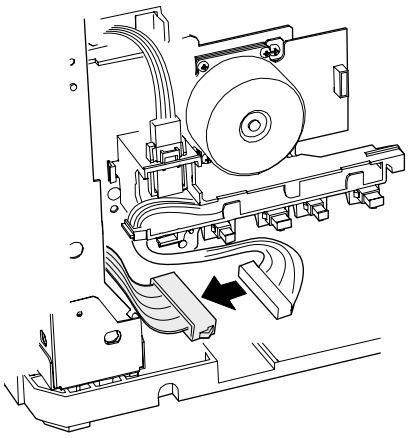
* When replacing, be careful not to adhere conduction grease (black) to the drive section.

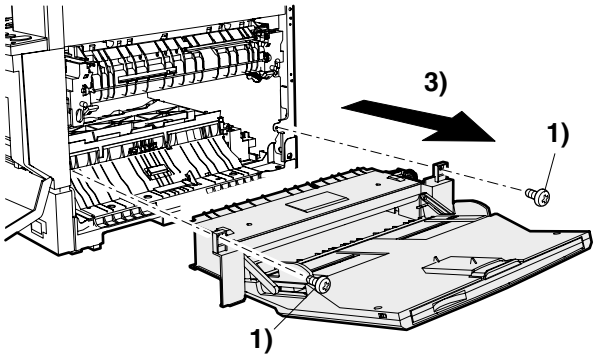
Slightly apply grease GE676 (UKOG-0013QSZZ) to the drum boss.

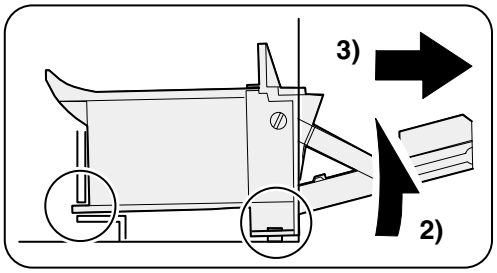


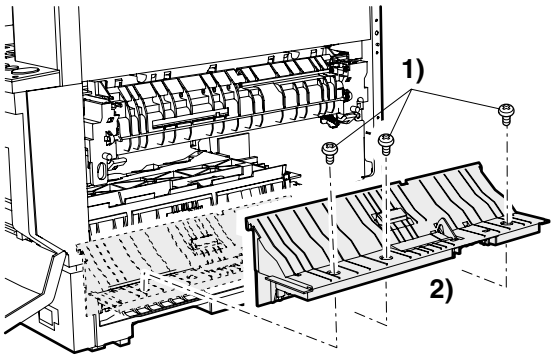
b. Separation sheet

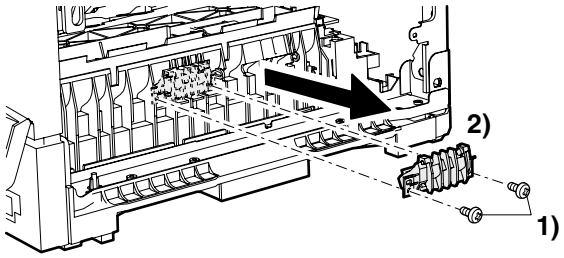


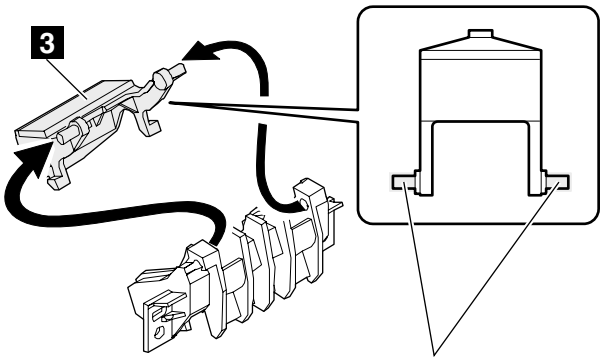










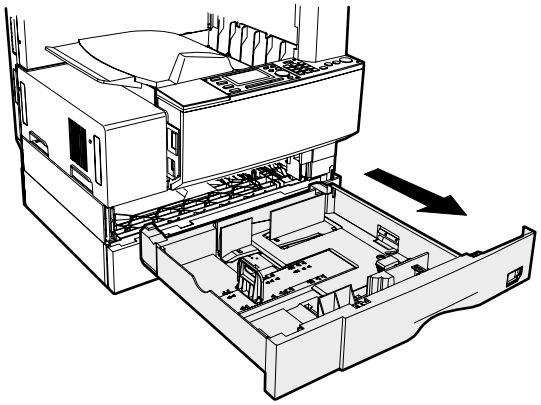


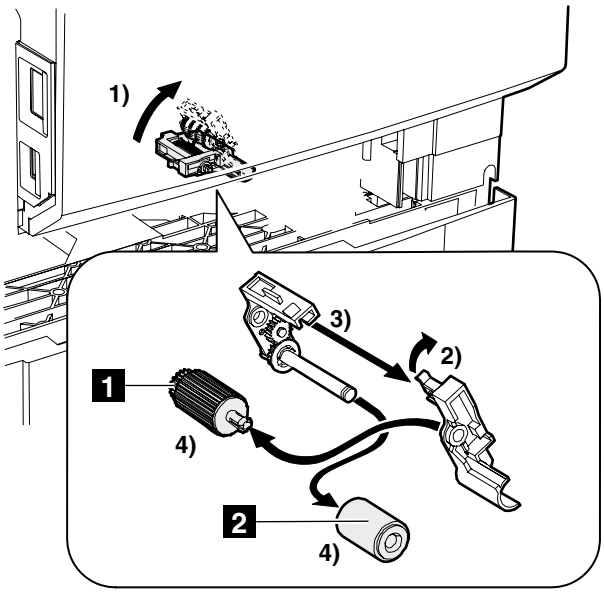
* Slightly apply grease GP501MR (UKOG-0012QSZZ) around the axis. One rice grain for each.
  Grease should not come out when assembling.

No.	Part name	Service items	Cycle	Remarks
1	Pickup roller (500 sheets tray)	Check	50k	Changing criteria for parts: 50k
2	Separation roller (500 sheets tray)	Check	50k	Changing criteria for parts: 50k
3	Separation sheet (500 sheets tray)	Check	50k	Changing criteria for parts: 50k

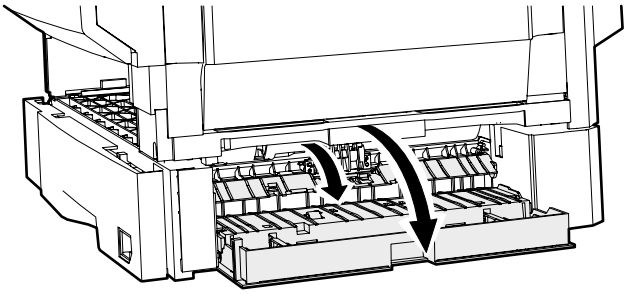
(3) Lower 500 sheets tray paper feed

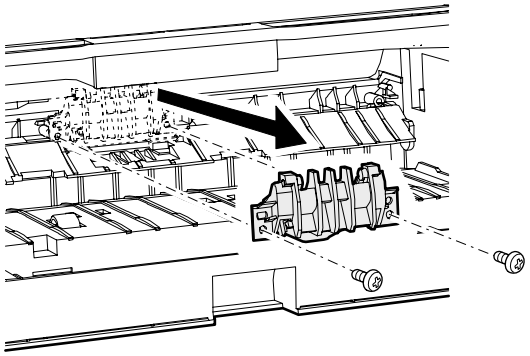
a. Paper feed roller/pickup roller

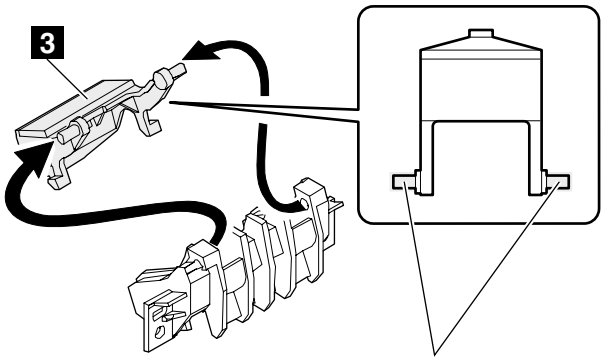




b. Separation sheet





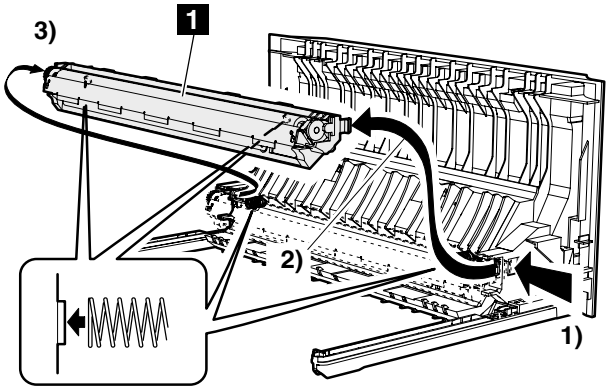


* Slightly apply grease GP501MR (UKOG-0012QSZZ) around the axis. One rice grain for each.
  Grease should not come out when assembling.

No.	Part name	Service items	Cycle	Remarks
1	Pickup roller (500 sheets tray)	Check	50k	Changing criteria for parts: 100k
2	Separation roller (500 sheets tray)	Check	50k	Changing criteria for parts: 100k
3	Separation sheet (500 sheets tray)	Check	50k	Changing criteria for parts: 100k

E. Side door unit

(1) Transport roller unit

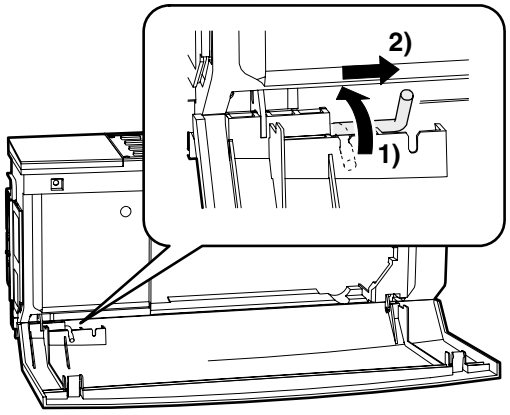


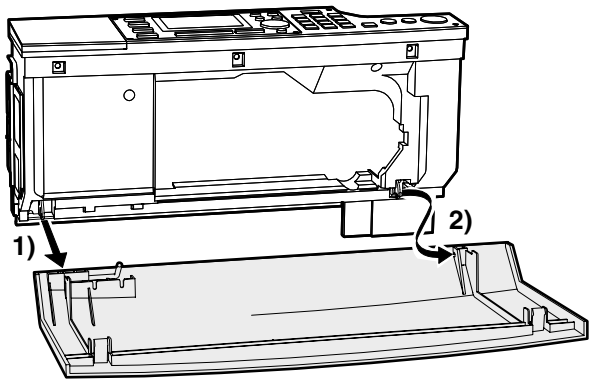
* Check that two springs are securely inserted into the transfer roller unit bosses.

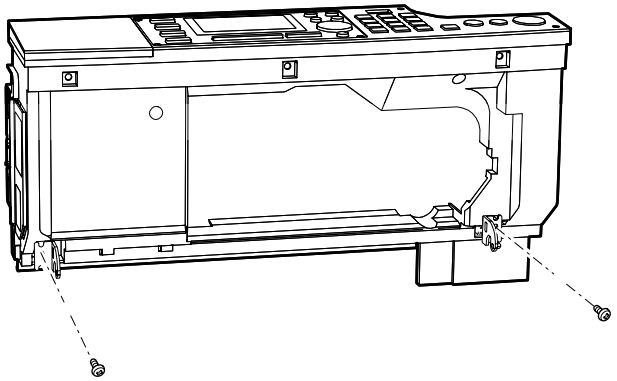
No.	Part name	Service items	Cycle	Remarks
1	Transport roller unit	Cleaning	50k	Unit supply only (Individual parts in the unit can not be supplied.)
		Replace	100k	

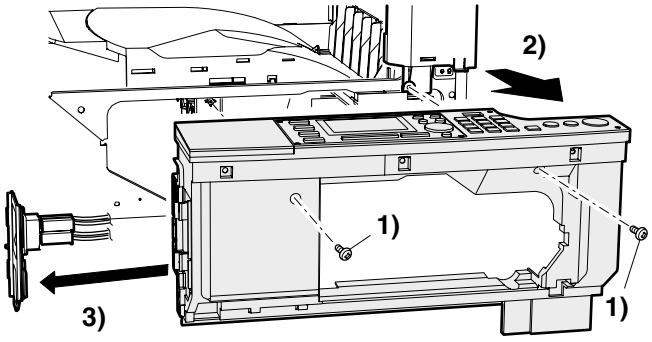
F. 1st paper exit unit

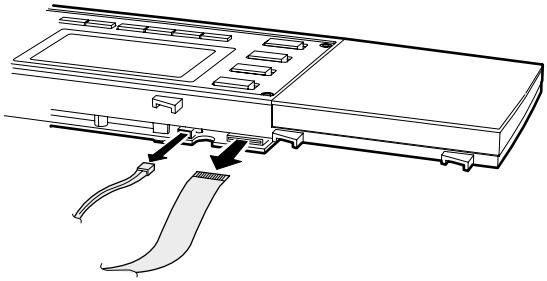
(1) Paper exit roller

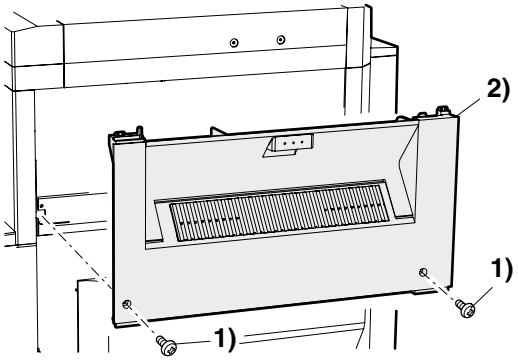




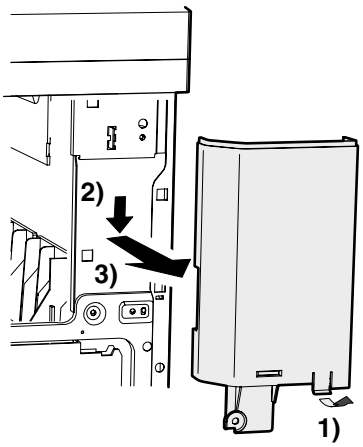




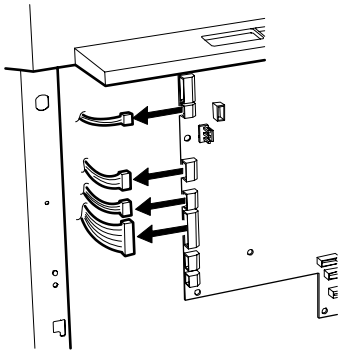




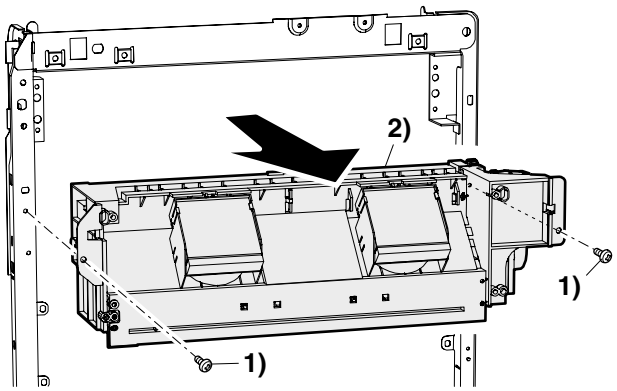
- Remove the front right cabinet.

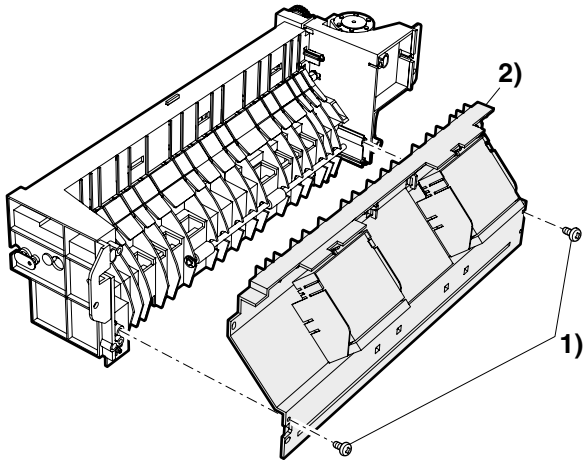


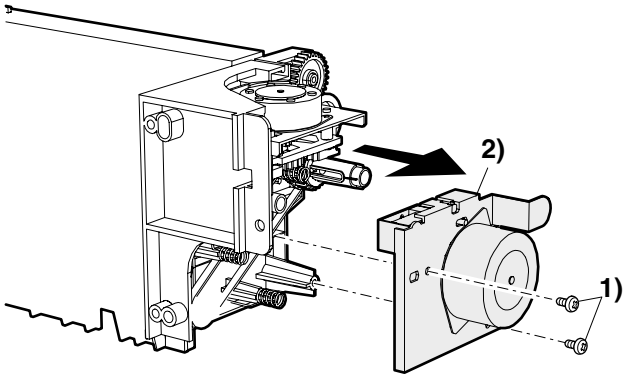
- Remove the MCU PWB section connector.

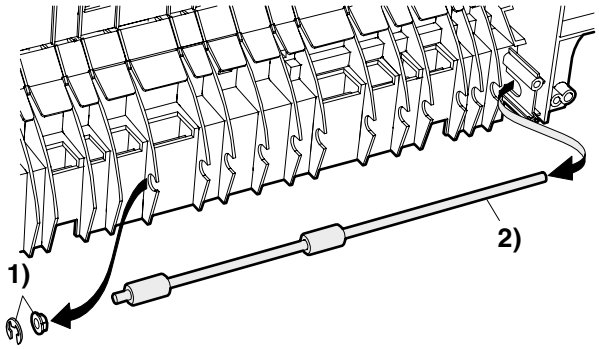


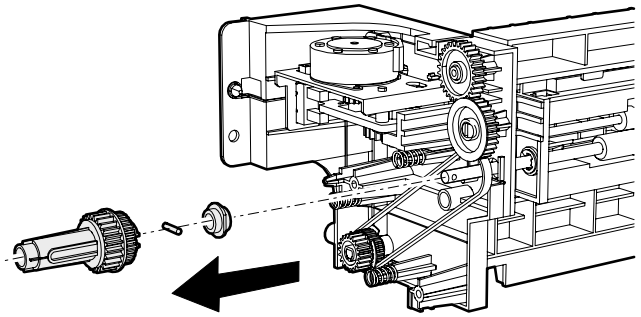
- Remove the delivery frame.



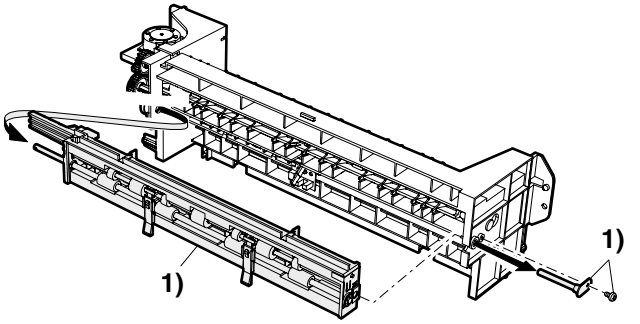


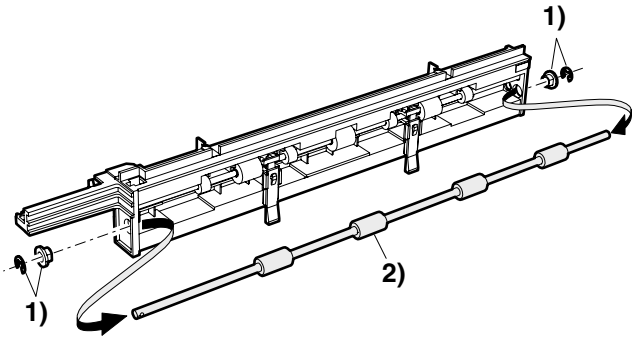




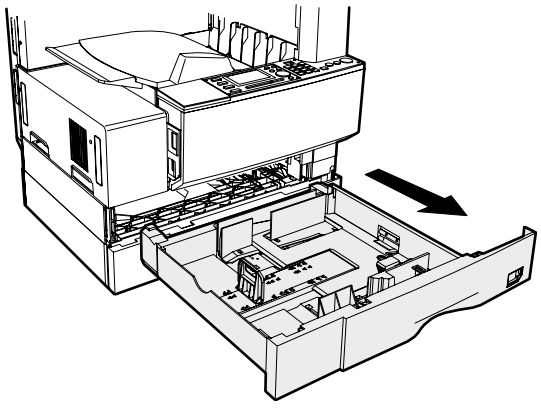


Note: Check to confirm that the solenoid shaft is in the gate bracket, and fix with the screw.



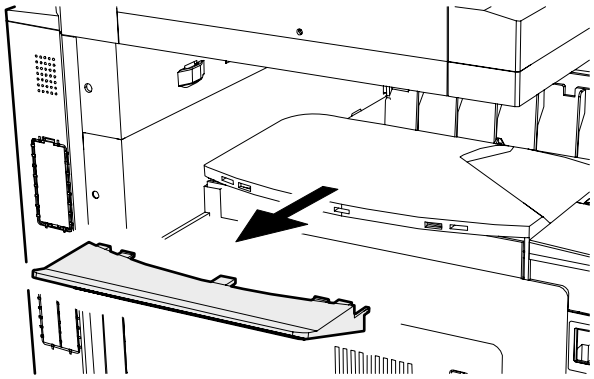


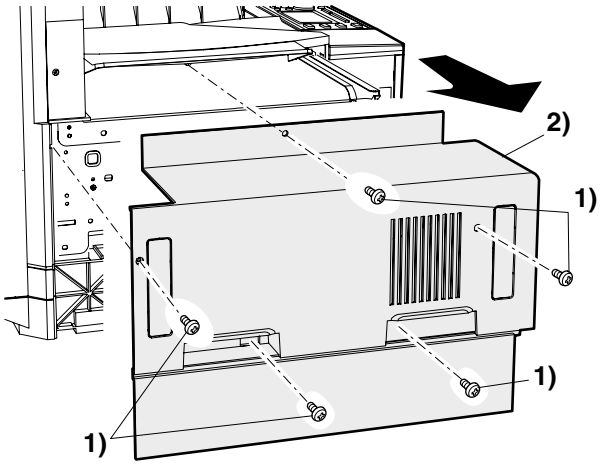
G. Laser unit

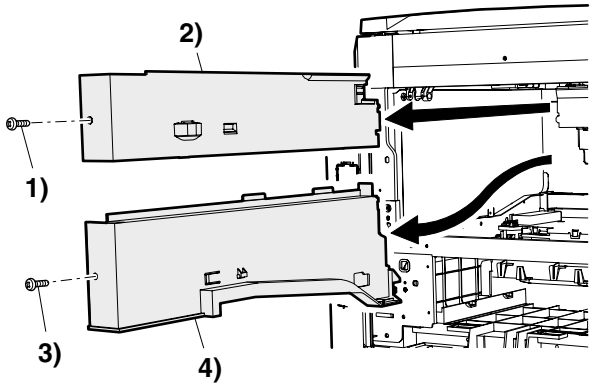


Note: Before removing the left cover, remove the No.1 cassette in advance.

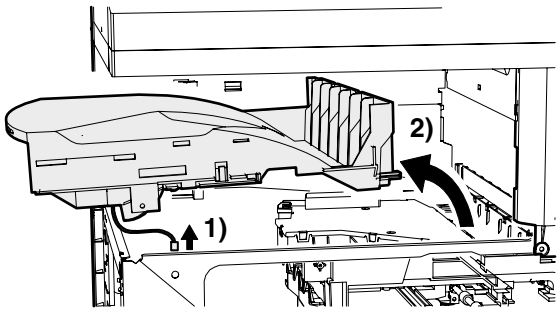
(1) LSU

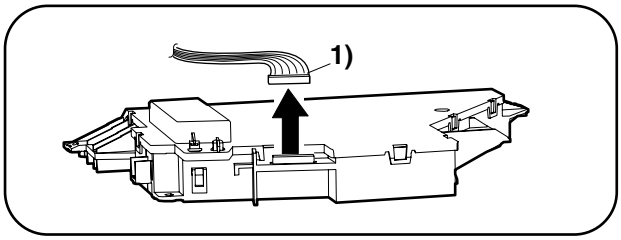


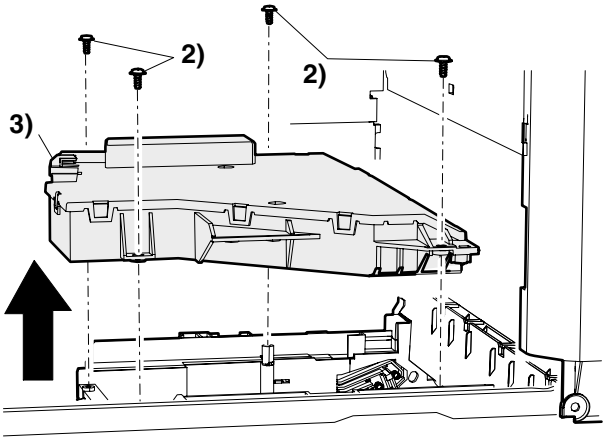




Remove the panel unit, before performing the following works.

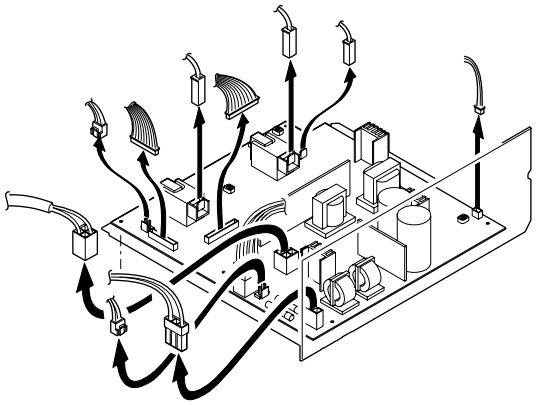


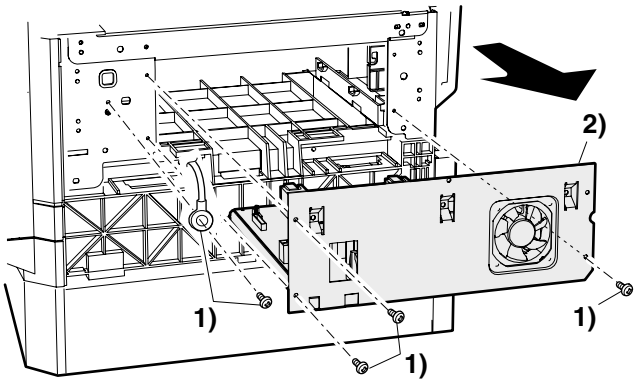




H. Power unit

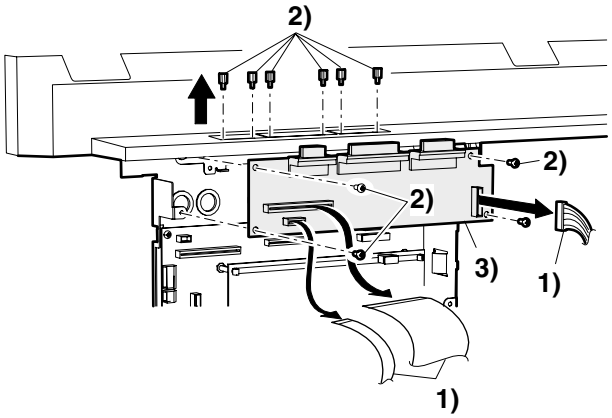
(1) Power source



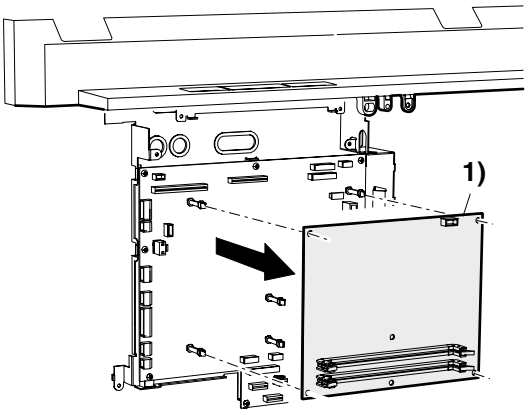


I. PWB

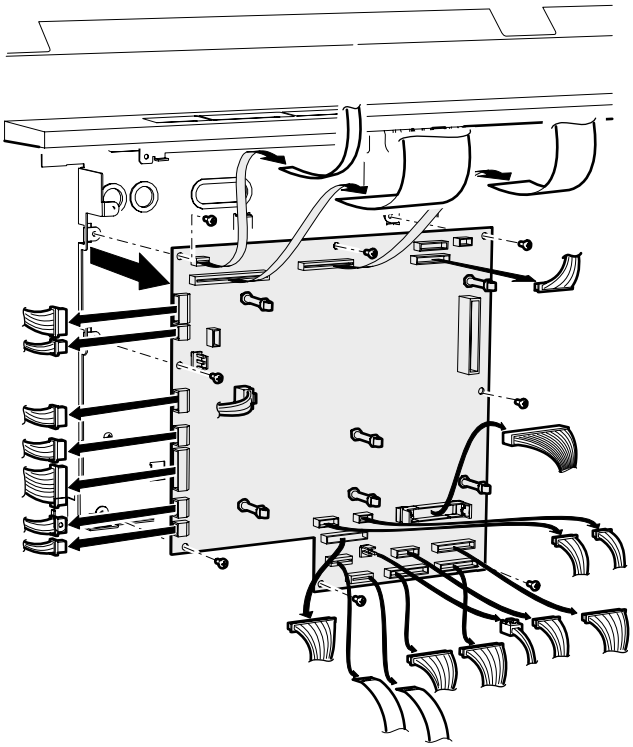
(1) Option CN PWB



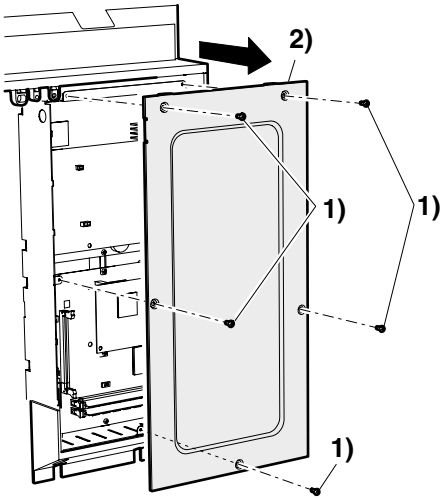
(2) IMC PWB

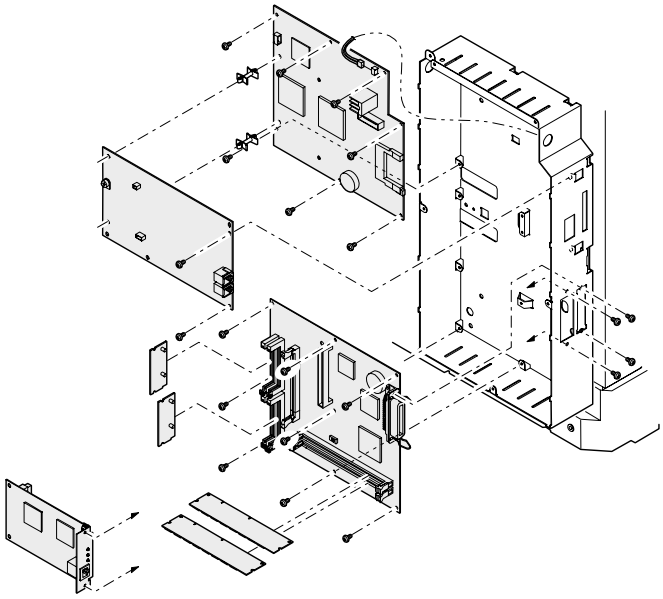


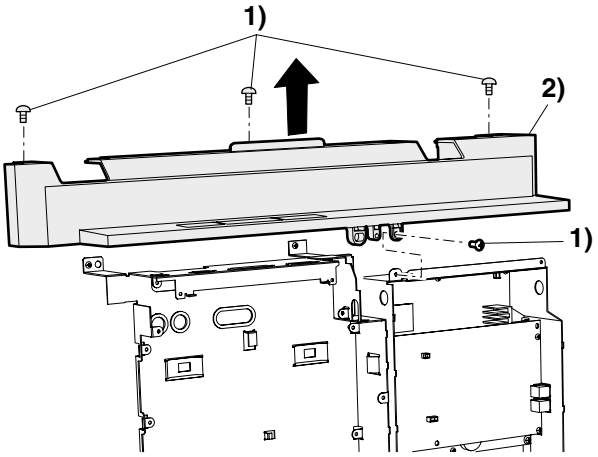
(3) MCU PWB

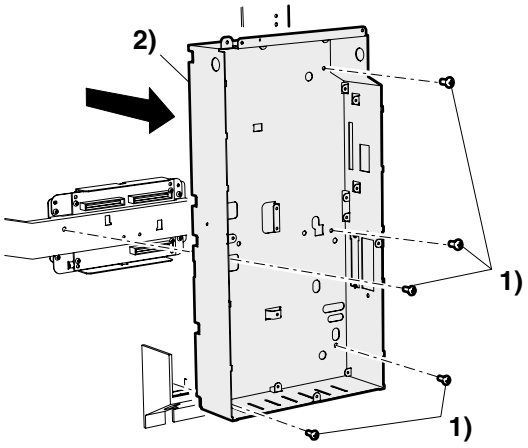


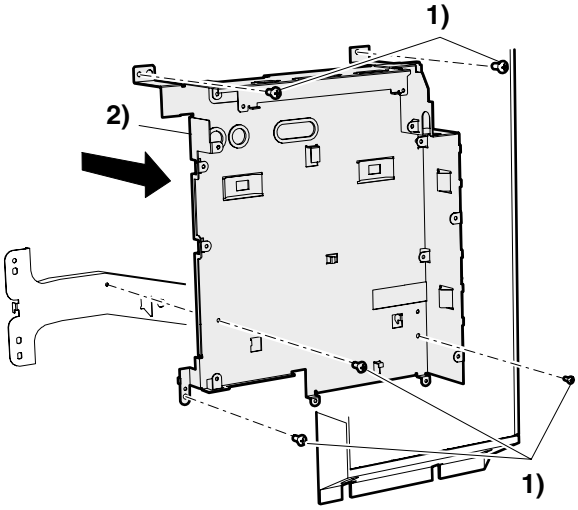
(4) Motherboard PWB

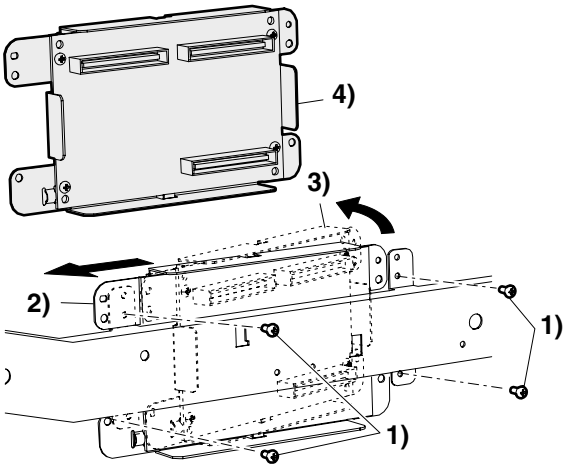


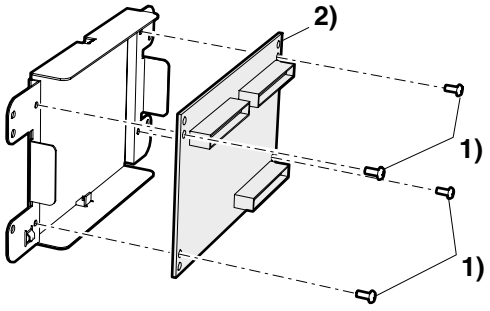




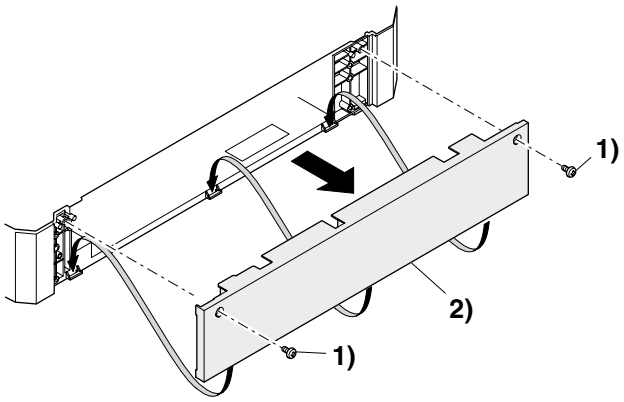


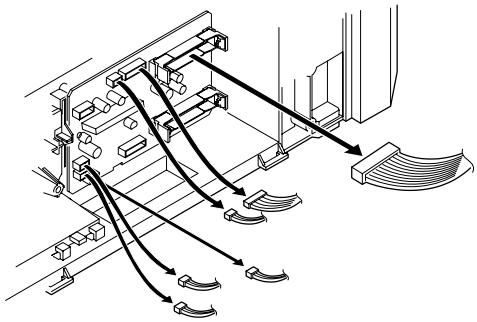


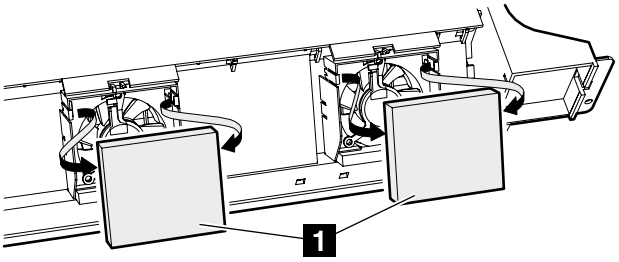


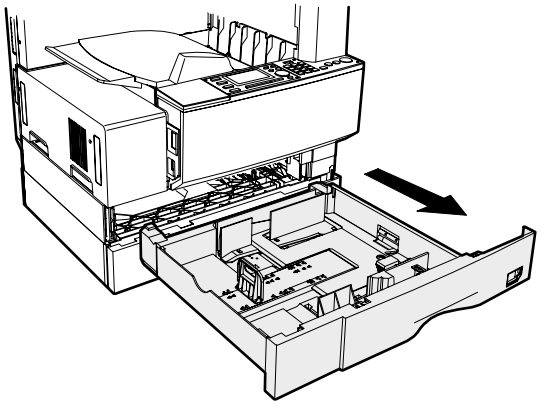


(5) Second interface PWB

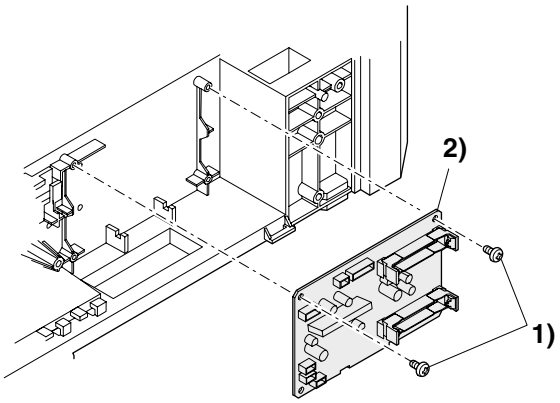


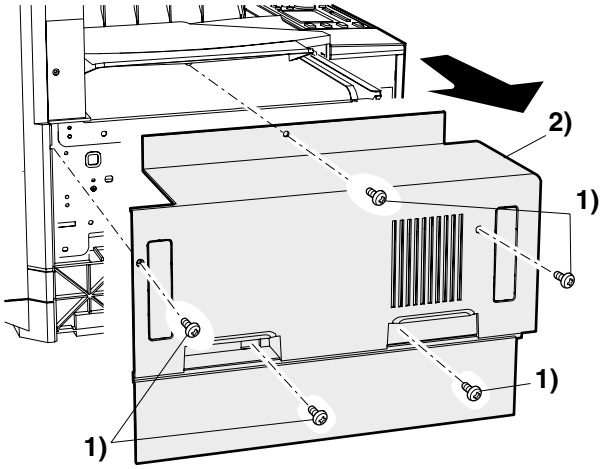




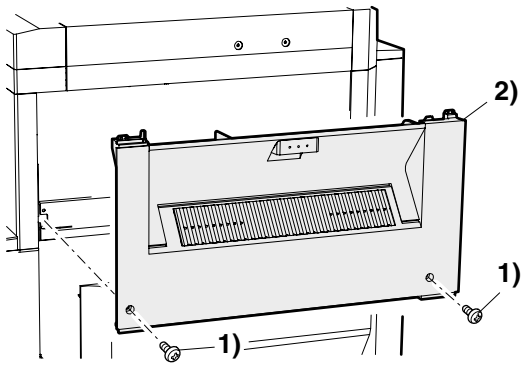


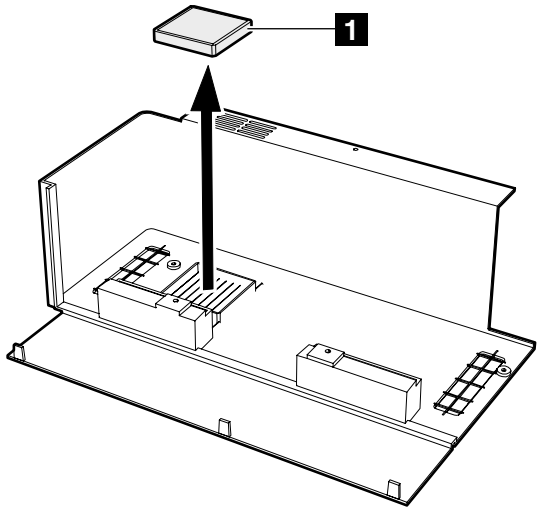
Note: Before removing the left cover, remove the No.1 cassette in advance.





J. Ozone filter





No.	Part name	Service items	Cycle	Remarks
1	Ozone filter	Replace	50k	

[11] OTHERS

1. Flash ROM version up procedure

(Items necessary for upgrade)

A Personal computer

B RS232C Cross cable (D-sub 9pin to D-sub 9pin, or D-sub 25pin to D-sub 9pin)

C Software for upgrade

(Type of ROM)

Flash ROM is directly attached to each PWB

(Targeted PWBs)

1 MCU-PWB

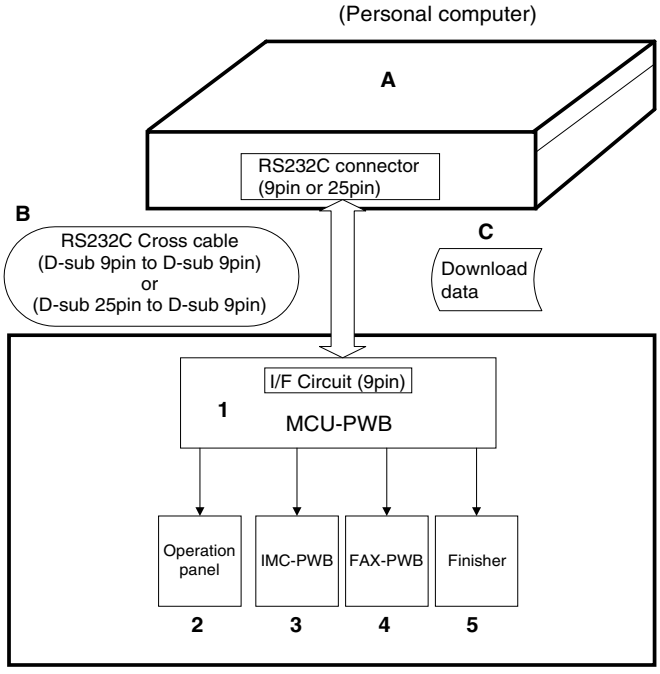
2 Panel-PWB

3 IMC-PWB

4 FAX-PWB

5 Finisher-PWB

Diagrammatic sketch for upgrade method



(AR-235/275)

(Necessary files for download)

- Maintenance software: mainte.exe
- Loader files
  Main body loader file: downbios.cvt
  Panel loader file: pnlbios.cvt
  IMC loader file: imcbios.cvt
  FAX loader file: faxbios.cvt
  Finisher loader file: fiubios.cvt
- Printer control board data transfer tool: fcopy.exe

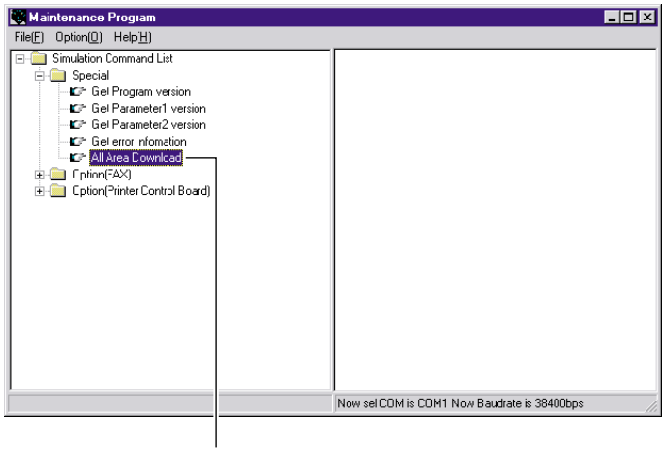
The maintenance program performs the following program download operations:

- Main body program download
- FAX program download
- Printer control board program download

A. Program download procedure (Main body program, FAX program)

The download procedures of the main body program and the FAX program are as follows:

1) Preliminary procedure: Connect the PC and the main body with the download cable (RS-232C cable).
2) Main body side: Turn on the power of the main body. The machine enters the download mode.
3) PC side: Confirm that the tree is displayed on the maintenance program.
   * Be sure to perform procedure 2) before turning on the power.



When the tree is displayed, download may be performed. (Double click to use.)

4) PC side: Double click "Special" in the main tree item to develop the sub tree items, and double click "All Area Download" in the sub tree items.
5) PC side: The maintenance program asks you the file name. Specify the download file (*.dat).

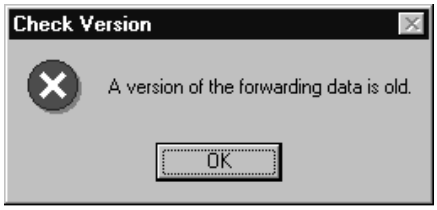
   Download file

   - leopXXXX.dat:
     Collective download file (Main body, IMC, Panel, FAX, Finisher)
     XXXXT: Whole release version
6) PC side: The download file is specified, download is automatically performed.

   The download time is as follows

   - Main body program download time: About 5 min
   - FAX program download time: About 5 min

Note: If the download file version is older than the machine file version, the following alert message is displayed during download.



In this case, press the OK button to interrupt the current download operation, and the next download is performed.

7) PC side: When the message below is displayed, download is completed.

   Completion message: DOWNLOAD COMPLETE
8) After-process: Terminate the maintenance program, and turn on the power of the main body.

With the above procedures, download is completed.

2. User programs

User Program	Description	Default	Setting range
Auditing Mode	Enables or disables the basic auditing mode, which controls access to copier.		
Copies per Account	Displays the total number of copies made against account numbers.		
Reset Account	Resets all audit accounts or selectively resets individual accounts.		
Account Number Control	Registers accounts, deletes accounts or changes an account number.		
Account Limit	Sets the maximum number of copies which can be made against a registered account number.		
Account Number Security	Guards against trial and error entering of audit account numbers.		
Key Operator Number Change	Changes the key operator code number.	00000 (5 digits)	
Exposure Adjust	Lightens or darkens copies in the automatic exposure mode.	Level 3	5 steps
Limit of Copies	Sets the maximum number of copies that can be selected.	999	
Margin Default	Sets the initial margin shift values.		AB series: 5mm pitch (5 to 20mm), Inch series: 1/4" pitch (1/4 to 1“)
Erase Adjust	Set the initial amount of the erase area.		AB series: 5mm pitch (5 to 20mm), Inch series: 1/4" pitch (1/4 to 1")
Initial Conditions	Sets the copier's initial settings in the ready condition.		
Stream Feeding	Enables the stream feeding mode for copying from the optional document feeder.		
Rotation Copy	Enables/disables rotation of original images.		
Sort Auto Select	Sets the default output mode.		
Output Trays	Sets the output trays for the copy and printer modes.		
Memory for Printer	Sets the memory assignment used for printer feature (optional for AR-235 and AR-275).	50%	30 to 70% (in the increment of 10%)
Offset Function	Enables/disables the offset function in the output tray.		
Toner Save Mode	Reduces toner consumption.		
Auto Power Off	Sets a time interval after which the copier enters the auto power shut-off mode.	60sec	10/30/60/90/120/240min
Auto Clear	Sets a time interval after which the copier returns to the initial settings.	60sec	0/30/60/90/120/240sec
Preheat Mode	Sets the time that elapses before the copier enters the preheat mode after copying is completed.	15min	0/1/2/5/10/15/30min
Message Time	Sets the length of time that messages are displayed.	Normal (6sec)	Slow (9sec)/Normal (6sec)/Slow (3sec)
Time Out Setting	Sets the time after which a print job resumes.	30sec	0sec (Immediate)/10sec/30sec/60sec
Disable Auto Paper Selection	Prevents automatic paper selection.		
Disable Auto Tray Switching	Prevents automatic switching between the paper trays.		
Disable Job Program Changing	Prevents stored programs from being replaced or deleted.		
Disable SPF/RSPF	Prevents the use of the optional document feeder when it malfunctions.		
Disable Duplex Copy	Temporarily prevents the duplex system from operating when it malfunctions. Allows the use of the copier but not the duplex system.		
Disable Stapler	Prevents damage to the stapler while awaiting repair service. (The stapler is included in the optional finisher (AR-FN5).)		
Disable Center Tray Counting	Disables count of paper output tray of the copier.		
Disable PC/Modem	Provides or prevents access to key operator programs through a PC/modem without key operator code entry.		
Disable Auto Power Shut-off	Disables the auto power shut-off mode.		
Disable Beep at Key Touch	Enables or disables sounding of beep when keys are touched.		
Disable Backlight Change	Disables change of LCD backlighting color.		
Total Count	Recalls the total counts, including counts of the copier, document feeder, duplex module, and stapler.		

3. E-MAIL STATUS/E-MAIL ALERTS

A. Basic functions

1) Event driven type text message transmission by using MIB information of Printer control board.
2) Management information which body has is coded and transmitted in a file type according to the schedule or in the event driven type. In this case, the specified mail software is used to receive and develop the data.

The above functions are available as standard provision only when the Printer control board and the NIC card are installed.
For 2), the software key protect is made.

B. Main body specifications

The body provides event information to the controller. The file generated by the MCU according to setup can be transmitted as an attached file as information for dealers. When a dealer's mail address is set, a file can be attached only to a mail which is transmitted to the mail address.

To read the attached file, the specified mail software is required. That is, the attached file includes numeral information of each main body and event information in coded state. If the other mail software is used to receive, the display contents on the client side cannot be guaranteed.

C. Printer controller specifications

The controller supports the following transmission functions:

- Text mail transmission by event driven setup and schedule driven setup.
- Mail transmission with an attached file by event driven setup and schedule driven setup. For the attached file, the printer controller makes a file of information data from the MCU.
- It controls sending time and requests for the machine information at the sending time to the MCU.

(1) Additional machine information

Information to identify the machine. The user administrator manually enters this information by using a browser. The information is displayed in the text of the mail.

* These items of information are kept on the controller side or on the NIC side.
- Machine name
- Machine code
- Installation place

(2) Alert Message

ID	Event	Message	Condition
1	Paper Jam	! ! ! MISFEED HAS OCCURRED ! ! !	When paper/document jam has occurred. If a jam is detected when the power is turned ON or reset, checking is made again.
2	Toner Low	! ! ! TONER SUPPLY IS LOW ! ! !	When toner LOW is detected for the first time. If toner LOW is detected when the power is turned ON or reset, checking is made again.
3	Toner Empty	! ! ! ADD TONER ! ! !	When toner empty is detected for the first time. If toner empty is detected when the power is turned ON or reset, checking is made again.
4	Paper Empty	! ! ! LOAD PAPER/XXX ! ! !	When paper empty is detected for the first time. If paper empty is detected when the power is turned ON or reset, checking is made again. No information on the number of steps of trays. Manual feed is not supported. When a tray empty is detected, information of all the trays that are empty at that time is delivered.
5	Service Required	! ! ! CALL FOR SERVICE ! ! !	When the machine enters the self-diagnosis mode. If detected when the power is turned ON or reset, checking is made again.
6	PM Required	! ! ! MAINTENANCE REQUIRED ! ! !	When the maintenance counter or the developer counter reaches the specified count. If detected when the power is turned ON or reset, checking is made again.

(3) Status Message

Counter information

When schedule driven is set, the total counter, the copy counter, and the printer counter are displayed in a mail address for general. These information items are supplied from the controller MIB. The "total counter" means the "effective paper counter" controlled by the MCU.

Timer information

For schedule drive message, the Printer controller controls transmission time by means, and transmits a mail.

Timer setup is made from the Web setup page.

D. Handling of transmission data

In E-mail Alerts and E-mail Status, a transmission task is generated regardless of the job which is under process in the machine. These tasks are processed in the following rules:

- When the machine receives a mail transmission request during a job process (copy scan, copy output, print output, other process) of the machine, it performs transmission process regardless of the job.
- When the machine receives a mail transmission request under other situation, if the job is triggered during transmission process, the job is started.
- When the machine receives a mail transmission request during the simulation mode, the request is accepted and transmission process is started.
- When the machine receives a mail transmission request during the key operator program, it is accepted and transmission process is started.
- When the controller sends two or more requests during a job, only the last request is accepted.

CAUTION FOR BATTERY REPLACEMENT

(Danish) ADVARSEL !
Lithiumbatteri – Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri
af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandoren.

(English) Caution !
Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type
recommended by the manufacturer.

"BATTERY DISPOSAL"
CONTAINS MANGANESE DIOXIDE LITHIUM BATTERY
MUST BE DISPOSED OF PROPERLY.
REMOVE THE BATTERY FROM THE PRODUCT AND
CONTACT FEDERAL OR STATE ENVIRONMENTAL
AGENCIES FOR INFORMATION ON RECYCLING
AND DISPOSAL OPTIONS.

"BATTERY DISPOSAL"
CONTAINS LITHIUM-ION BATTERY.
MUST BE DISPOSED OF PROPERLY.
REMOVE THE BATTERY FROM THE PRODUCT AND
CONTACT FEDERAL OR STATE ENVIRONMENTAL
AGENCIES FOR INFORMATION ON RECYCLING
AND DISPOSAL OPTIONS.

(Finnish) VAROITUS
Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan
tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden
mukaisesti.

(French) ATTENTION
Il y a danger d'explosion s' il y a remplacement incorrect
de la batterie. Remplacer uniquement avec une batterie du
même type ou d'un type équivalent recommandé par
le constructeur.
Mettre au rebut les batteries usagées conformément aux
instructions du fabricant.

(Swedish) VARNING
Explosionsfara vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent
typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens
instruktion.

(German) Achtung
Explosionsgefahr bei Verwendung inkorrekter Batterien.
Als Ersatzbatterien dürfen nur Batterien vom gleichen Typ oder
vom Hersteller empfohlene Batterien verwendet werden.
Entsorgung der gebrauchten Batterien nur nach den vom
Hersteller angegebenen Anweisungen.

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